

State of the Workforce Report IV: Region 10

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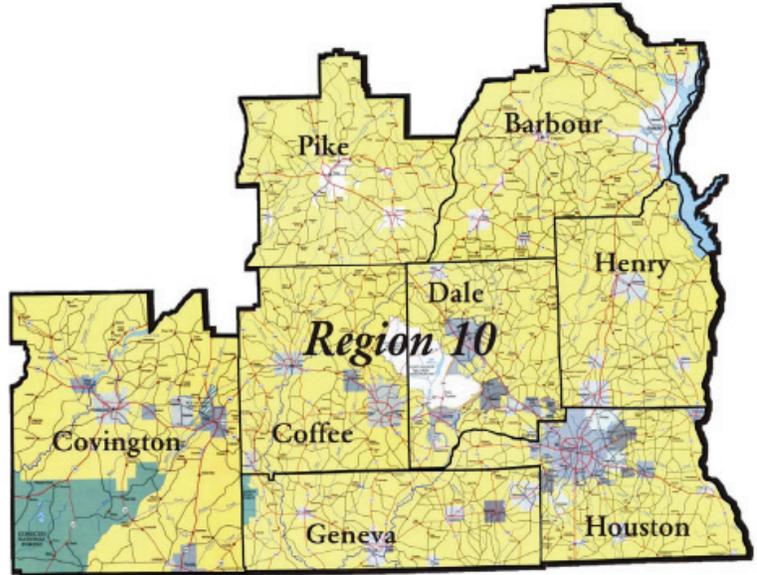
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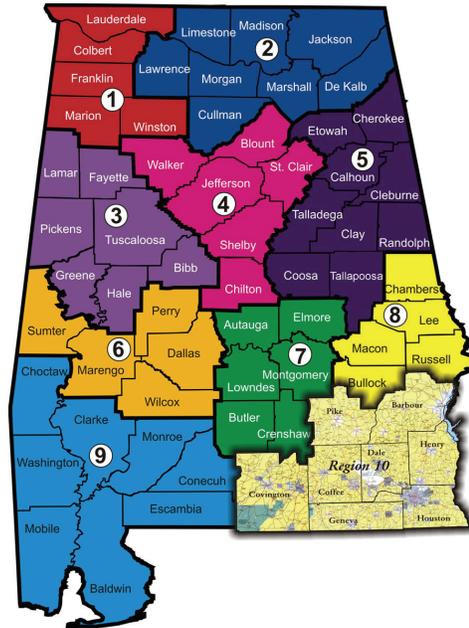


October 2009

Center for Business and Economic Research
University Center for Economic Development
Institute for Social Science Research

THE UNIVERSITY OF ALABAMA

State of the Workforce Report IV: Region 10



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by

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Summary

- This report analyzes workforce supply and demand issues using available metrics of workforce characteristics for Workforce Development Region 10 and presents implications and recommendations.
- Region 10 had a 7.9 percent unemployment rate in May 2009, with 11,447 unemployed. An underemployment rate of 21.9 percent for 2009 means that the region has a 40,698-strong available labor pool that includes 29,251 underemployed workers who are looking for better jobs and are willing to commute farther and longer for such jobs.
- Congestion, which can slow economic development, is rising; 960 net in-commuters in 2000 changed to 1,560 net out-commuters in 2006. Over the same period, the number of in- and out-commuters jumped from 17,600 to 44,296. Increased commute time and distance in 2009 as well as significant within region commuting implies that continuous maintenance and development of regional transportation infrastructure and systems is important.
- By sector, the top five employers in the region are manufacturing; health care and social assistance; retail trade; educational services; and accommodation and food services. In the third quarter of 2008 these five industries provided 81,063 jobs, 63 percent of the regional total. Three of these leading employers had higher wages than the region's \$2,868 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 6,631 jobs were created per quarter from second quarter 2001 to third quarter 2008; quarterly net job flows averaged 708. 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 Waiters and Waitresses; Registered Nurses; Customer Service Representatives; Maids and Housekeeping Cleaners; and Cooks, Restaurant.
- The top five fast-growing occupations are Fitness Trainers and Aerobics Instructors; Veterinary Technologists and Technicians; Helpers, Construction Trades, All Other; Amusement and Recreation Attendants; and Hotel, Motel, and Resort Desk Clerks.
- The top 50 high-earning occupations are mainly in management, health, engineering, and computer fields and have a \$67,150 minimum salary. Eight of the top 10 are health occupations.
- Of the top 40 high-demand, the top 39 fast-growing, and 50 high-earning occupations, two belong to all three categories: Physical Therapists and Computer Software Engineers, Systems Software. Six occupations are in high-demand and high-earning: Aerospace Engineers; Engineering Managers; Pharmacists; Physical Therapists; Computer Software Engineers, Systems Software; and Surgeons. Thirty occupations are both high-demand and fast-growing.

- Of the region's 751 occupations and occupational categories, 64 are expected to decline over the 2006 to 2016 period, with 21 occupations expected to sharply decline by at least 8 percent and lose a minimum of 20 jobs each. Education and training for these 21 occupations should slow accordingly.
- Skill and education requirements for jobs keep rising. Educational and training requirements of high-demand, fast-growing, and high-earning occupations demonstrate the importance of education in developing the future workforce. In the future, more jobs will require postsecondary education and training at a minimum.
- The importance of basic skills generally and for high-demand, high-growth, and high-earning jobs indicates a strong need for training in these skills. For Region 10 the pace of training needs to increase for technical, social, and science 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 2006 base, a 3,532-worker surplus for 2016 and a 13,326-worker shortfall for 2025 are expected. This will demand a focus on worker skills through 2016, after which both skills and the expected shortfall must be priorities for 2025. Worker shortfalls for critical occupations will need to be continuously addressed. Strategies to address skill needs and worker shortfalls should include: (1) improvements in education and its funding; (2) continuation and enhancement of programs to assess, retrain, and place dislocated workers; (3) focus on hard-to-serve populations (e.g. out-of-school youth); (4) lowering the high school dropout rate; (5) use of economic opportunities to attract new residents; (6) facilitation of in-commuting; and (7) encouragement of older worker participation in the labor force.
- Improving education is important because (i) a highly educated and productive workforce is a critical economic development asset, (ii) productivity rises with education, (iii) educated people are more likely to work, and (iv) it yields high private and social rates of return on investment. Workforce development must view all of education and other programs (e.g. adult education, career technical training, worker retraining, career readiness, etc.) as one system. Funding to support workforce development may require tax reform at state and local levels and should provide for flexibility as workforce needs change over time and demand different priorities. Publicizing both private and public returns to education can encourage individuals to raise their own educational attainment levels, while also promoting public and legislative support for education.
- Higher incomes that come with improved educational attainment and work skills will help to increase personal income for the region as well as raise additional local (county and city) tax revenues. This is important, especially for a region that has fairly low population and labor force growth rates as well as low per capita income.
- Together, workforce development and economic development can build a strong, well-diversified Region 10 economy. Indeed, one cannot achieve success without the other.

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 10.1 shows labor force information on Region 10 and its counties for 2008 and May 2009.¹

Table 10.1 Region 10 Labor Force Information

	2008			
	Labor Force	Employed	Unemployed	Rate (%)
Barbour	10,033	9,250	783	7.8
Coffee	20,617	19,732	885	4.3
Covington	16,668	15,777	891	5.3
Dale	19,877	18,929	948	4.8
Geneva	11,316	10,768	548	4.8
Henry	7,406	6,898	508	6.9
Houston	46,099	44,097	2,002	4.3
Pike	15,677	15,004	673	4.3
Region 10	147,693	140,455	7,238	4.9
Alabama	2,162,479	2,053,502	108,977	5.0
United States	154,287,000	145,362,000	8,924,000	5.8
	May 2009			
	Labor Force	Employed	Unemployed	Rate (%)
Barbour	9,914	8,882	1,033	10.4
Coffee	20,164	18,800	1,365	6.8
Covington	16,380	14,844	1,536	9.4
Dale	19,513	18,034	1,478	7.6
Geneva	11,181	10,207	973	8.7
Henry	7,189	6,539	650	9.0
Houston	45,052	41,801	3,250	7.2
Pike	15,500	14,338	1,162	7.5
Region 10	144,893	133,445	11,447	7.9
Alabama	2,124,766	1,938,686	186,081	8.8
United States	153,830,000	140,265,000	13,565,000	8.8

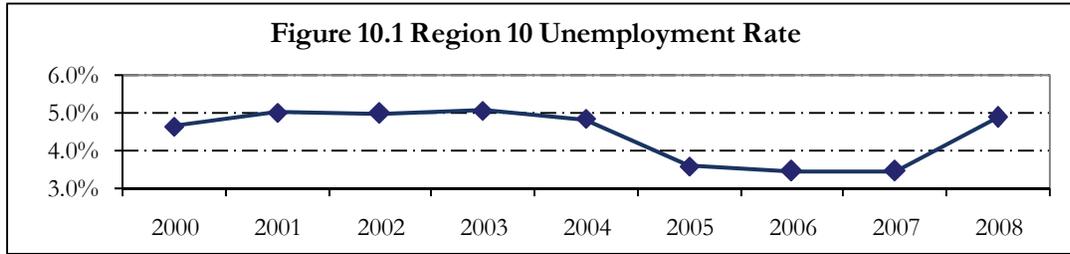
Source: Alabama Department of Industrial Relations and U.S. Bureau of Labor Statistics.

The recession that began in December 2007 has increased the number of unemployed and raised county unemployment rates from a range of 4.3 to 7.8 percent for 2008 (4.9 percent for the region) to between 6.8 and 10.4 percent in May 2009, with 7.9 percent for the region. Three counties—Barbour, Covington, and Henry—had higher unemployment rates than Alabama’s 8.8 percent.

Annual unemployment rates for 2000 to 2008 are shown in Figure 10.1. The 2001 national economic recession kept the region’s unemployment at about 5.0 percent through 2004, but employment gains resulting from successful state and local economic development efforts brought the rate to record lows

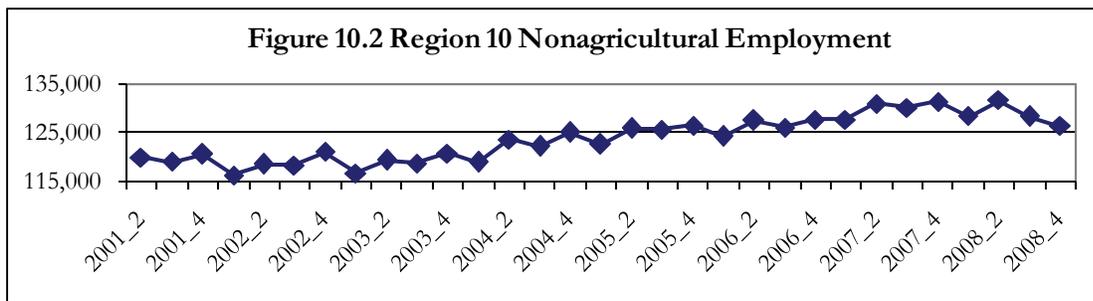
¹ Alabama labor force information is available from the Labor Market Information (LMI) Division of the Alabama Department of Industrial Relations. LMI compiles data in cooperation with the U.S. Bureau of Labor Statistics.

in 2006 and 2007. Year-to-date monthly labor force data point to higher regional unemployment rates for 2009 and the next several years than the 4.9 percent of 2008 due to the recent recession.



Source: Alabama Department of Industrial Relations.

Nonagricultural employment of the region's residents averaged 123,839 quarterly from the second quarter of 2001 to the fourth quarter of 2008 (Figure 10.2). The number of jobs has been declining since reaching a peak of about 131,600 in the first quarter of 2008.



Source: Alabama Department of Industrial Relations and U.S. Census Bureau.

Table 10.2 shows worker distribution by age in Region 10 for the third quarter of 2008. The region's workforce is older than the state's; workers age 45 and over are 40.9 percent of the region's nonagricultural employment versus 39.9 percent for the state. Those who are age 65 and over constitute 4.0 percent of nonagricultural employment compared to 3.7 percent for Alabama. Labor force participation of younger residents must increase to meet long term occupational projections for growth and replacement. Otherwise older workers may have to work longer.

Table 10.2 Workers by Age Group Q3 2008

	Nonagricultural Employment	
	Number	Percent
14-18	4,049	3.1
19-24	15,195	11.8
25-34	27,459	21.3
35-44	29,427	22.9
45-54	29,424	22.9
55-64	18,034	14.0
65+	5,141	4.0
45 and over total	52,599	40.9
Total all ages	128,732	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 2000 there were 17,600 in- and out-commuters for Region 10, with a net of 960 in-commuters (Table 10.3). By 2006, the number of in- and out-commuters had risen sharply to 44,296 but the situation had reversed to a net of 1,560 residents who commuted out for work. There is also significant commuting inside the region; Table 10.3 shows that commute time and distance for workers are up in 2009 and have been rising since 2004. All of this points to worsening congestion, which can delay or slow economic development by impeding the flow of goods and movement of workers. It is therefore essential that the region's transportation infrastructure and systems be continuously maintained and developed to ensure uninterrupted mobility of workers and goods.

Table 10.3 Commuting Patterns

Area	Inflow, 2000			Outflow, 2000		
	Number	Percent		Number	Percent	
Barbour	1,816	19.6		885	10.6	
Coffee	458	4.9		573	6.9	
Covington	1,202	13.0		1,796	21.6	
Dale	814	8.8		593	7.1	
Geneva	795	8.6		679	8.2	
Henry	187	2.0		374	4.5	
Houston	2,696	29.1		1,812	21.8	
Pike	1,312	14.1		1,608	19.3	
Region 10	9,280	100.0		8,320	100.0	
<hr/>						
Region 10	Inflow, 2006			Outflow, 2006		
	21,368	100.0		22,928	100.0	
<hr/>						
			Percent of workers			
Average commute time (one-way)			2004	2005/2006	2008	2009
Less than 20 minutes			66.5	60.0	56.6	57.3
20 to 40 minutes			21.4	26.4	32.1	27.3
40 minutes to an hour			6.0	6.1	6.7	8.7
More than an hour			2.6	2.1	2.6	3.6
Average commute distance (one-way)			2004	2005/2006	2008	2009
Less than 10 miles			55.2	52.7	48.0	49.7
10 to 25 miles			26.3	28.5	33.0	31.4
25 to 45 miles			9.6	10.3	13.3	12.9
More than 45 miles			4.9	2.9	4.4	5.5

Note: Rounding errors may be present.

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

Population

The Region 10 population estimate of 333,552 for 2008 is 4.3 percent more than was recorded for 2000 (Table 10.4). Population shrank in two counties—Covington and Dale—and grew in the other six. The region's population is projected to grow 6.6 percent in this decade to about 341,000 by

2010, with Covington and Dale counties losing some residents. Houston County will add the most residents and grow the fastest, followed by Coffee County.

Table 10.4 Region 10 Population

	1990 Census	2000 Census	2008 Estimate	% Change 2000-2008	2010 Projection	% Change 2000-2010
Barbour	25,417	29,038	29,309	0.9	29,991	3.3
Coffee	40,240	43,615	47,753	9.5	49,586	13.7
Covington	36,478	37,631	36,856	-2.1	37,036	-1.6
Dale	49,633	49,129	48,292	-1.7	48,644	-1.0
Geneva	23,647	25,764	25,882	0.5	26,195	1.7
Henry	15,374	16,310	16,591	1.7	16,732	2.6
Houston	81,331	88,787	98,488	10.9	101,930	14.8
Pike	27,595	29,605	30,381	2.6	30,853	4.2
Region 10 Total	299,715	319,879	333,552	4.3	340,967	6.6
Alabama	4,040,587	4,447,100	4,661,900	4.8	4,768,769	7.2
United States	248,709,873	281,421,906	304,059,724	8.0	310,232,863	10.2

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

Table 10.5 shows population counts, estimates, and projections by age group. The population aged 65 and over will grow rapidly after 2010, with the first of the baby boom generation turning 65 in 2011. Consequently, growth of the prime working age group (20-64) and youth (0-19) will lag that of the total population. 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.

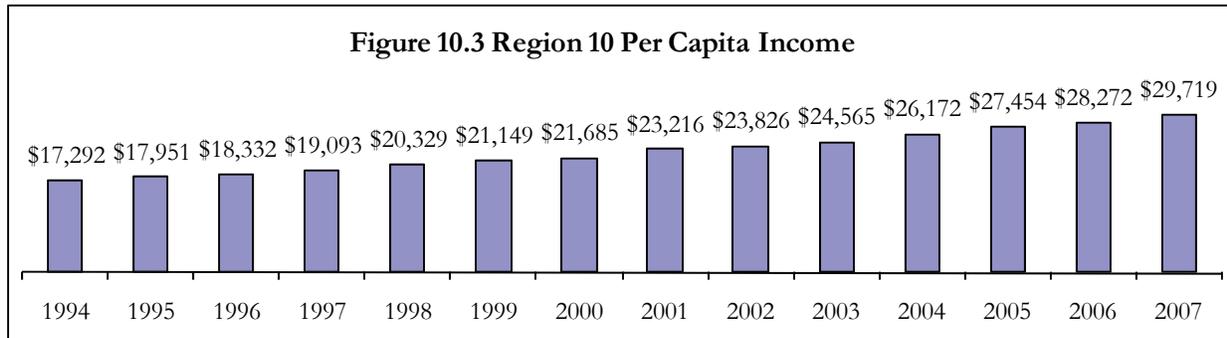
Table 10.5 Population by Age Group (2000-2006) and Projections

Age Group	2000	2006	2016	2025
0-19	89,429	87,270	87,261	89,168
20-24	20,583	22,457	23,441	23,141
25-29	21,071	19,037	22,293	21,432
30-34	20,993	20,210	21,264	22,433
35-39	23,736	21,198	19,823	22,966
40-44	24,070	23,385	21,614	22,101
45-49	22,110	24,192	22,491	20,267
50-54	20,975	22,688	24,713	22,937
55-59	16,981	21,166	25,244	23,010
60-64	14,580	17,475	23,095	25,059
65+	45,351	48,118	61,491	76,375
20-64 Total	185,099	191,808	203,978	203,346
Total Population	319,879	327,197	352,730	368,889
<i>Change from 2006</i>				
0-19			0.0%	2.2%
20-64			6.3%	6.0%
Total Population			7.8%	12.7%

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

Per Capita Income

Per capita income (PCI) in Region 10 was at \$29,719 in 2007 (Figure 10.4), up 72 percent from 1994, but \$2,700 or 8.3 percent below the state average of \$32,419. Houston County had the highest PCI with \$31,462; Barbour County had the lowest with \$23,663.



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

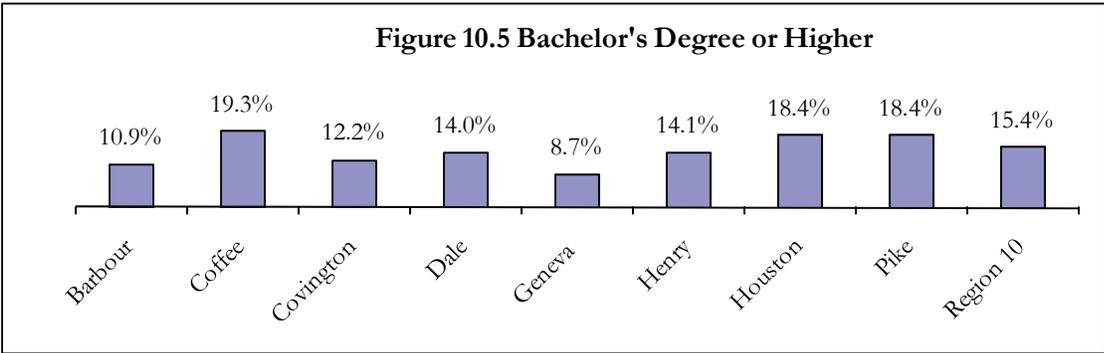
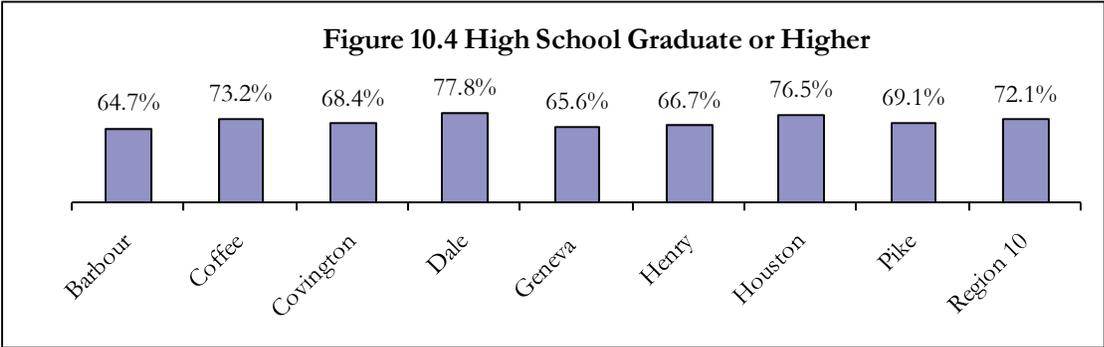
Educational Attainment

Educational attainment in 2000 of Region 10 residents who were 25 years old and over is shown in Table 10.6 and Figures 10.4 and 10.5. A little over 72 percent graduated from high school and 15.4 percent held a bachelor's or higher degree. Dale, Houston, and Coffee counties performed best on high school graduates. Coffee, Houston, and Pike counties had the highest bachelor's or higher degree holders. Educational attainment is important as skills rise with education and high-wage jobs for the 21st century demand more skill sets.

Table 10.6 Educational Attainment in 2000, Population 25 Years and Over

	Barbour	Coffee	Covington	Dale	Geneva	Henry	Houston	Pike	Region 10
Total	18,896	28,885	25,705	31,390	17,588	10,967	58,671	17,703	209,805
No schooling completed	476	494	477	312	342	228	893	271	3,493
Nursery to 4th grade	289	290	394	310	226	162	438	200	2,309
5th and 6th grade	573	670	869	593	717	308	1,065	640	5,435
7th and 8th grade	1,104	1,474	1,734	1,178	1,049	639	2,501	984	10,663
9th grade	1,002	1,299	1,287	965	1,026	586	1,972	836	8,973
10th grade	1,046	1,091	1,442	1,345	1,116	637	2,256	928	9,861
11th grade	1,061	1,397	1,027	1,207	660	594	2,518	847	9,311
12th grade, no diploma	1,128	1,040	885	1,066	910	500	2,128	766	8,423
High school graduate/equivalent	6,124	7,571	8,473	9,159	5,626	3,192	17,809	5,312	63,266
Some college, less than 1 year	1,196	2,044	1,756	2,718	1,287	754	4,370	912	15,037
Some college, 1+ years, no degree	1,939	3,972	2,665	5,527	2,072	1,262	8,270	2,172	27,879
Associate degree	890	1,969	1,554	2,612	1,031	560	3,634	571	12,821
Bachelor's degree	1,362	3,562	2,005	3,013	979	1,017	7,114	2,018	21,070
Master's degree	540	1,572	788	1,082	447	434	2,440	959	8,262
Professional school degree	142	308	300	239	72	84	939	200	2,284
Doctorate degree	24	132	49	64	28	10	324	87	718

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 to areas because of the various contributing factors combined with each area’s economic, social, and geographic characteristics.

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

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

Region 10 had an underemployment rate of 21.9 percent in 2009. Applying this rate to May 2009 labor force data means that 29,251 employed residents were underemployed (Table 10.7). Adding the unemployed gives a total available labor pool of 40,698 for the region. This is 3.6 times the number of unemployed and is a more realistic measure of the available labor pool in the region. Prospective employers must be able to offer the underemployed higher wages, better benefits or terms of employment, or some other incentives to induce them to change jobs. Underemployment rates ranged from 12.7 percent for Pike County to 29.8 percent for Covington. Henry County had the smallest available labor pool while Houston had the largest.

Table 10.7 Underemployed and Available Labor by County

	<u>Region 10</u>	<u>Barbour</u>	<u>Coffee</u>	<u>Covington</u>	<u>Dale</u>	<u>Geneva</u>	<u>Henry</u>	<u>Houston</u>	<u>Pike</u>
Labor Force	144,893	9,914	20,164	16,380	19,513	11,181	7,189	45,052	15,500
Employed	133,445	8,882	18,800	14,844	18,034	10,207	6,539	41,801	14,338
Underemployment rate	21.9%	26.8%	25.5%	29.8%	19.6%	25.0%	13.7%	21.5%	12.7%
Underemployed workers	29,251	2,379	4,785	4,426	3,542	2,552	898	9,004	1,825
Unemployed	11,447	1,033	1,365	1,536	1,478	973	650	3,250	1,162
Available labor pool	40,698	3,412	6,150	5,962	5,020	3,525	1,548	12,254	2,987

Note: Rounding errors may be present. Based on May 2009 labor force data and 2009 underemployment rates.

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

Underemployment rates for counties, Workforce Development Regions (WDRs), and the state were determined from an extensive survey on the state's workforce. A total of 925 complete responses were obtained from Region 10. About 48 percent (447 respondents) were employed, of whom 98 stated that they were underemployed. A lack of job opportunities in their area, low wages at available jobs, and living too far from jobs are the primary reasons given for being underemployed. Economic development efforts can help in this regard. Nonworkers cite retirement, disability or other health concerns, and a lack of job opportunities in their area as the main reasons for their status. These residents may become part of the labor force if their problems can be addressed.

A comparison of underemployed workers to the overall workforce in Region 10 shows that:

- Fewer work full-time and more of the part-timers would like to work full-time.
- Fewer hold multiple jobs.
- They commute longer and farther.
- More are transportation operators or laborers.

- They have shorter job tenure.
- More are in wholesale or retail trade; farming, hunting, fishing, landscaping, or other agricultural services; and healthcare, business, hotel, restaurant, and household services.
- They earn less.
- 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 higher income.
- More are willing to commute farther and longer for a better job.
- Fewer are satisfied with their current jobs.
- More have sought better jobs in the preceding quarter.
- More are willing to train for a better job even if they have to pay part or all of the cost.
- Fewer are married.
- Fewer are male.
- Their median age of 46 is two years less than the median for all workers.
- Slightly fewer are Hispanic.
- Fewer are white.
- They have slightly higher educational attainment.

Table 10.8 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 (80.1 percent) are satisfied or completely satisfied with their jobs. Workers are most satisfied with the shift or work schedule and least satisfied with their earnings. Fewer (62.2 percent) underemployed workers are satisfied with their jobs. The underemployed are most satisfied with their commuting distance and very dissatisfied with their earnings.

Workers are generally willing to train for a new or better job, with the underemployed being more willing (67.8 percent vs. 61.2 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 at every level of training cost burden considered. 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 10.8 Job Satisfaction and Willingness to Train (Percent)

Job Satisfaction						
		Completely Dissatisfied	Dissatisfied	Neutral	Satisfied	Completely Satisfied
Employed						
Overall		3.4	3.4	12.8	31.5	48.6
	Earnings	9.0	9.4	24.2	28.0	28.6
	Retention	3.6	4.7	10.7	19.0	59.3
	Work	1.3	2.7	8.7	21.0	65.6
	Hours	3.1	2.9	11.4	22.4	60.0
	Shift	3.4	1.6	6.7	18.3	69.4
	Conditions	3.6	3.8	13.0	27.5	51.7
	Commuting Distance	5.2	3.1	12.3	12.5	66.7
Underemployed						
Overall		9.2	9.2	19.4	30.6	31.6
	Earnings	21.4	15.3	28.6	21.4	12.2
	Retention	8.2	10.2	12.2	20.4	49.0
	Work	5.1	6.1	17.4	22.5	49.0
	Hours	9.2	6.1	14.3	16.3	54.1
	Shift	9.2	3.1	11.2	23.5	52.0
	Conditions	12.2	9.2	19.4	20.4	38.8
	Commuting Distance	9.2	7.1	7.1	17.4	59.2
Willingness to Train						
		Completely Unwilling	Unwilling	Neutral	Willing	Completely Willing
Employed						
For a new or better job		19.6	3.7	15.0	11.0	50.2
	If paid by trainee	43.0	21.3	20.5	6.5	6.5
	If paid by trainee and government	14.1	12.6	27.8	20.9	22.8
	If paid by government	4.9	4.2	11.0	15.6	63.5
Underemployed						
For a new or better job		10.7	3.6	17.9	8.3	59.5
	If paid by trainee	41.3	13.3	26.7	6.7	6.7
	If paid by trainee and government	13.3	8.0	28.0	21.3	26.7
	If paid by government	6.7	1.3	4.0	14.7	73.3

Note: Rounding errors may be present.

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

Workforce Demand

Industry Mix

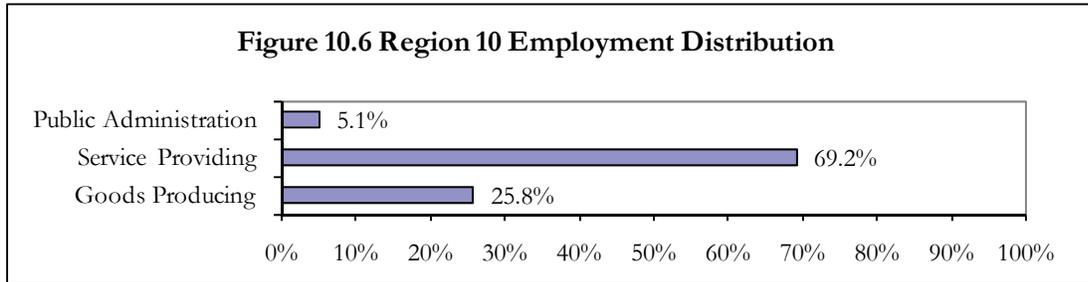
The manufacturing sector was the largest Region 10 employer with 25,226 jobs in the third quarter of 2008 (Table 10.9). Rounding out the top five industries by employment are health care and social assistance; retail trade; educational services; and accommodation and food services. These five industries provided 81,063 jobs, 63.2 percent of the regional total. The average monthly wage across all industries in the region was \$2,868; three leading employers paid more than this average. New hire monthly earnings averaged \$1,773, about 62 percent of the average monthly wage. The highest average monthly wages were for utilities at \$4,802; management of companies and enterprises \$3,700; mining \$3,589; and professional, scientific, and technical services \$3,554. Accommodation and food services paid the least at \$1,197. Professional, scientific, and technical services had the highest average monthly new hire wages with \$3,215, followed by utilities at \$3,040, and manufacturing with \$2,458. Arts, entertainment, and recreation paid newly hired workers the least, \$733.

Table 10.9 Industry Mix (Third Quarter 2008)

Industry by 2-digit NAICS Code	Total Employment	Share	Rank	Average Monthly Wage	Average Monthly New Hire Earnings
11 Agriculture, Forestry, Fishing and Hunting	1,497	1.17%	18	\$2,505	\$1,664
21 Mining	157	0.12%	20	\$3,589	\$1,871
22 Utilities	1,693	1.32%	14	\$4,802	\$3,040
23 Construction	6,165	4.81%	8	\$2,885	\$2,121
31-33 Manufacturing	25,226	19.67%	1	\$3,346	\$2,458
42 Wholesale Trade	5,082	3.96%	9	\$3,499	\$2,320
44-45 Retail Trade	16,855	13.14%	3	\$2,129	\$1,330
48-49 Transportation and Warehousing	6,369	4.97%	7	\$3,319	\$2,377
51 Information	1,680	1.31%	16	\$3,344	\$2,044
52 Finance and Insurance	2,942	2.29%	12	\$3,299	\$2,321
53 Real Estate and Rental and Leasing	1,586	1.24%	17	\$2,412	\$1,788
54 Professional, Scientific, and Technical Services	3,593	2.80%	11	\$3,554	\$3,215
55 Management of Companies and Enterprises	1,684	1.31%	15	\$3,700	\$1,766
56 Administrative and Support and Waste Management and Remediation Services	4,468	3.48%	10	\$2,210	\$1,565
61 Educational Services	10,942	8.53%	4	\$3,277	\$2,045
62 Health Care and Social Assistance	17,836	13.91%	2	\$3,004	\$1,964
71 Arts, Entertainment, and Recreation	947	0.74%	19	\$1,210	\$733
72 Accommodation and Food Services	10,204	7.96%	5	\$1,197	\$865
81 Other Services (Except Public Administration)	2,806	2.19%	13	\$2,072	\$1,507
92 Public Administration	6,515	5.08%	6	\$2,572	\$1,523
ALL INDUSTRIES	128,249	100.00%		\$2,868	\$1,773

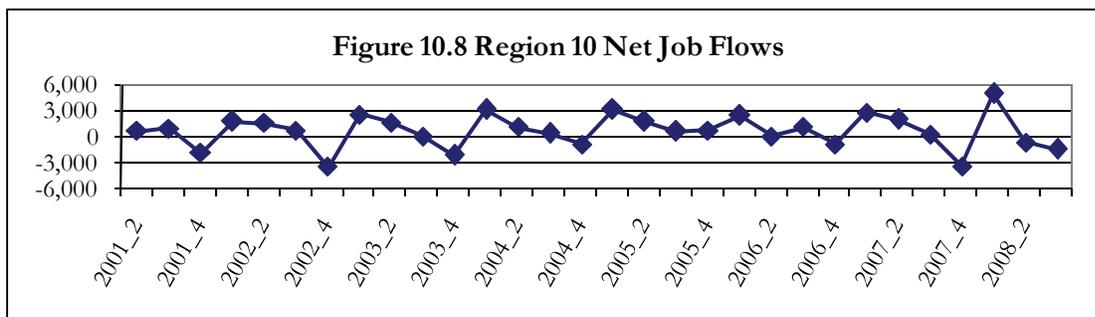
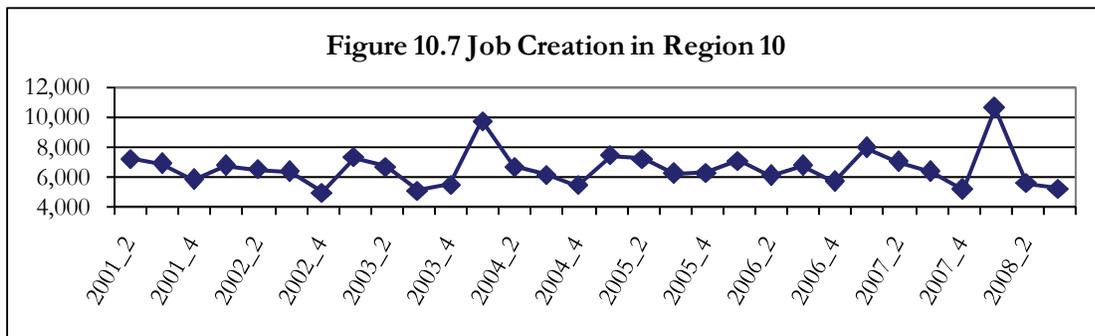
Source: Alabama Department of Industrial Relations and U.S. Census Bureau.

By broad industry classification, service producing industries provided 69.2 percent of jobs in third quarter 2008 (Figure 10.6). Goods producing industries were next with 25.8 percent and public administration accounted for 5.1 percent. The distribution is for all nonagricultural jobs in the region, but there is significant variation by county.



Job Creation and Net Job Flows

On average, 6,631 jobs were created per quarter from second quarter 2001 to third quarter 2008 (Figure 10.7); quarterly net job flows averaged 708 (Figure 10.8). Quarterly net job flows generally reflected trends in job creation over the period, but both have been declining since their peak in first quarter 2008. Quarterly net job flows fluctuate considerably and have ranged from a loss of 3,410 to a gain of 5,029. Job creation refers to the number of new jobs that are created either by new area businesses or through the expansion of existing firms. Net job flows reflect the difference between current and previous employment at all businesses.



Source: Alabama Department of Industrial Relations and U.S. Census Bureau.

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

Out of a total 751 occupations and occupational categories in the region, 637 are single occupations. Table 10.10 shows the 40 occupations that are expected to be in high-demand, ranked by projected average annual job openings over the 2006 to 2016 period. Many of these occupations are common to the five largest employment sectors identified earlier (Table 10.9): manufacturing; health care and social assistance; retail trade; educational services; and accommodation and food services. Thus, these sectors will continue to dominate employment in the region.

The top five high-demand occupations are Waiters and Waitresses; Registered Nurses; Customer Service Representatives; Maids and Housekeeping Cleaners; and Cooks, Restaurant. Thirty of the high-demand occupations are also fast-growing. This means that these 30 occupations have a minimum annual growth rate of 2.41 percent, much faster than the regional and state occupational growth rates of 1.14 percent and 1.38 percent, respectively.

The 39 fastest growing occupations ranked by projected growth of employment are listed in Table 10.11. Most of these occupations are related to health, tourism and recreation, and manufacturing industries. The top five fast-growing occupations are Fitness Trainers and Aerobics Instructors; Veterinary Technologists and Technicians; Helpers, Construction Trades, All Other; Amusement and Recreation Attendants; and Hotel, Motel, and Resort Desk Clerks.

Table 10.12 shows the 50 selected highest earning occupations in the region. These occupations are mainly in management, health, engineering, and computer fields. Eight of the top 10 listed are health occupations. 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. Six occupations are both high-earning and in high-demand (Table 10.10): Aerospace Engineers; Engineering Managers; Pharmacists; Physical Therapists; Computer Software Engineers, Systems Software; and Surgeons. Two occupations are in high-demand, fast-growing, and high-earning: Physical Therapists and Computer Software Engineers, Systems Software.

Of the region's 751 occupations and occupational categories, 64 are expected to decline over the 2006 to 2016 period. Employment in the 21 sharpest-declining occupations will fall by at least 8 percent, with each losing a minimum of 20 jobs over the period (Table 10.13). 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 10.10 Selected High-Demand Occupations (Base Year 2006 and Projected Year 2016)

Occupation	Average Annual Job Openings		
	Total	Due to Growth	Due to Separations
Waiters and Waitresses *	155	55	100
Registered Nurses	115	70	45
Customer Service Representatives *	75	40	35
Maids and Housekeeping Cleaners *	65	40	25
Cooks, Restaurant *	55	30	25
Counter and Rental Clerks *	55	25	30
Elementary School Teachers, Except Special Education	45	20	25
Home Health Aides *	30	25	5
Amusement and Recreation Attendants *	25	15	10
Hotel, Motel, and Resort Desk Clerks *	25	15	10
Medical Assistants *	25	20	5
Fitness Trainers and Aerobics Instructors *	20	15	5
Computer Software Engineers, Applications *	20	15	5
Pharmacy Technicians *	20	10	10
Aircraft Mechanics and Service Technicians *	20	15	5
Dental Hygienists *	15	10	5
Dental Assistants *	15	10	5
Clergy *	15	10	5
Avionics Technicians *	15	10	5
Social and Human Service Assistants *	15	10	5
Tire Repairers and Changers *	10	5	5
Emergency Medical Technicians and Paramedics *	10	5	5
Bill and Account Collectors *	10	5	5
Special Education Teachers, Preschool, Kindergarten, and Elementary School *	10	5	5
Industrial Engineers *	10	5	5
Medical and Public Health Social Workers	10	5	5
Cost Estimators	10	5	5
Chemical Technicians	10	5	5
Radiologic Technologists and Technicians	10	5	5
Aerospace Engineers	10	5	5
Engineering Managers	10	5	5
Pharmacists	10	5	5
Veterinary Technologists and Technicians *	5	5	0
Network Systems and Data Communications Analysts *	5	5	0
Physical Therapists *	5	5	0
Lodging Managers *	5	5	0
Physical Therapist Assistants *	5	5	0
Computer Software Engineers, Systems Software *	5	5	0
Directors, Religious Activities and Education *	5	5	0
Surgeons	5	5	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 Industrial Relations and Center for Business and Economic Research, The University of Alabama.

Table 10.11 Selected Fast-Growing Occupations (Base Year 2006 and Projected Year 2016)

Occupation	Employment		Percent Change	Annual Growth (Percent)	Average Annual Job Openings
	2006	2016			
Fitness Trainers and Aerobics Instructors *	150	290	93	6.81	20
Veterinary Technologists and Technicians *	40	70	75	5.76	5
Helpers, Construction Trades, All Other	40	70	75	5.76	5
Amusement and Recreation Attendants *	230	400	74	5.69	25
Hotel, Motel, and Resort Desk Clerks *	250	400	60	4.81	25
Home Health Aides *	430	670	56	4.53	30
Network Systems and Data Communications Analysts *	100	150	50	4.14	5
Medical Assistants *	390	580	49	4.05	25
Physical Therapists *	100	140	40	3.42	5
Dental Hygienists *	260	360	38	3.31	15
Lodging Managers *	80	110	38	3.24	5
Physical Therapist Assistants *	80	110	38	3.24	5
Computer Software Engineers, Systems Software *	110	150	36	3.15	5
Computer Software Engineers, Applications *	NA	NA	36	3.13	20
Tire Repairers and Changers *	120	160	33	2.92	10
Veterinary Assistants and Laboratory Animal Caretakers	90	120	33	2.92	5
Personal and Home Care Aides	120	160	33	2.92	5
Dental Assistants *	250	330	32	2.82	15
Cooks, Restaurant *	910	1,200	32	2.80	55
Maids and Housekeeping Cleaners *	1,250	1,640	31	2.75	65
Emergency Medical Technicians and Paramedics *	230	300	30	2.69	10
Nonfarm Animal Caretakers	100	130	30	2.66	5
Directors, Religious Activities and Education *	100	130	30	2.66	5
Counter and Rental Clerks *	810	1,050	30	2.63	55
Bill and Account Collectors *	240	310	29	2.59	10
Waiters and Waitresses *	1,860	2,400	29	2.58	155
Special Education Teachers, Preschool, Kindergarten, and Elementary School *	140	180	29	2.54	10
Clergy *	420	540	29	2.54	15
Customer Service Representatives *	1,310	1,680	28	2.52	75
Medical Records and Health Information Technicians	250	320	28	2.50	10
Industrial Engineers *	180	230	28	2.48	10
Avionics Technicians *	360	460	28	2.48	15
First-Line Supv./Mgr. of Landscaping, Lawn Service, and Groundskeeping Workers	180	230	28	2.48	5
Pharmacy Technicians *	400	510	28	2.46	20
Aircraft Mechanics and Service Technicians *	510	650	27	2.46	20
Social and Human Service Assistants *	330	420	27	2.44	15
Helpers--Installation, Maintenance, and Repair Workers	330	420	27	2.44	20
Dining Room and Cafeteria Attendants and Bartender Helpers	110	140	27	2.44	10
Legal Secretaries	260	330	27	2.41	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 Industrial Relations and Center for Business and Economic Research, The University of Alabama.

Table 10.12 Selected High-Earning Occupations (Base Year 2006 and Projected Year 2016)

Occupation	Employment		Annual Growth (Percent)	Average Annual Job Openings	Mean Annual Salary (\$)
	2006	2016			
Anesthesiologists	50	70	3.42	0	229,640
Internists, General	100	130	2.66	0	209,900
Surgeons *	120	150	2.26	5	206,599
Physicians and Surgeons, All Other	230	300	2.69	15	192,652
Dentists, General	120	130	0.80	0	192,153
Chiropractors	70	80	1.34	0	181,034
Chief Executives	310	320	0.32	10	157,501
Family and General Practitioners	70	90	2.54	0	155,938
Lawyers	400	460	1.41	15	131,649
Optometrists	40	40	0.00	0	115,529
Pharmacists *	350	410	1.59	10	109,113
Sales Managers	210	230	0.91	5	107,317
Engineering Managers *	NA	NA	1.64	10	103,597
Medical and Health Services Managers	250	290	1.50	10	97,340
Computer Software Engineers, Systems Software *	110	150	3.15	5	91,427
Veterinarians	50	60	1.84	0	88,224
Computer and Information Systems Managers	120	140	1.55	0	85,196
Physician Assistants	20	20	0.00	0	82,484
Securities, Commodities, and Financial Services Sales Agents	70	90	2.54	0	81,825
Construction Managers	630	700	1.06	15	81,735
Human Resources Managers, All Other	50	50	0.00	0	80,733
Electronics Engineers, Except Computer	110	120	0.87	5	80,708
Environmental Engineers	20	20	0.00	0	80,620
General and Operations Managers	1,880	1,960	0.42	55	80,542
Engineers, All Other	NA	NA	0.87	5	78,530
Commercial Pilots	70	70	0.00	0	78,372
Education Administrators, Postsecondary	250	250	0.00	5	78,294
Financial Managers	320	360	1.18	10	78,104
Purchasing Managers	70	70	0.00	0	76,776
Personal Financial Advisors	80	110	3.24	0	76,347
Managers, All Other	800	860	0.73	20	75,797
Physical Therapists *	100	140	3.42	5	74,892
Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	20	20	0.00	0	74,490
Occupational Health and Safety Specialists	60	60	0.00	0	73,476
Aerospace Engineers *	NA	NA	1.90	10	73,264
Architects, Except Landscape and Naval	60	60	0.00	0	73,116
Financial Examiners	10	10	0.00	0	73,039
Education Administrators, Elementary and Sec. School	200	230	1.41	5	72,723
Transportation, Storage, and Distribution Managers	90	100	1.06	5	71,291
Business Teachers, Postsecondary	90	100	1.06	0	70,708
Marketing Managers	50	60	1.84	0	69,911
Nuclear Medicine Technologists	20	20	0.00	0	69,704
Conservation Scientists	NA	NA	0.00	0	69,568
Computer Specialists, All Other	110	120	0.87	5	69,380
Financial Specialists, All Other	40	40	0.00	0	68,523
Market Research Analysts	70	90	2.54	0	67,894
Occupational Therapists	30	40	2.92	0	67,811
Logisticians	80	90	1.18	0	67,646
Mechanical Engineers	100	110	0.96	0	67,255
Industrial Production Managers	160	160	0.00	5	67,150

Note: Employment data are rounded to the nearest 10; openings to the nearest 5. The salary data provided are based on the May 2008 release of the Occupational Employment Statistics (OES) combined employment and wage file. Estimates for specific occupations may include imputed data. Occupations in bold are also fast-growing. NA – Not available.

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

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

Table 10.13 Selected Sharp-Declining Occupations (Base Year 2006 and Projected Year 2016)

Occupation	Employment		Net Change	Percent Change
	2006	2016		
Sewing Machine Operators	1,260	940	-320	-25
Textile Winding, Twisting and Drawing Out Machine Setters, Operators, and Tenders	1,210	920	-290	-24
Farmers and Ranchers	2,050	1,860	-190	-9
Extruding and Forming Machine Setters, Operators, and Tenders, Synthetic & Glass Fibers	NA	NA	-100	-28
File Clerks	190	120	-70	-37
Agricultural Workers, All Other	510	440	-70	-14
Inspectors, Testers, Sorters, Samplers, and Weighers	840	770	-70	-8
Order Clerks	330	280	-50	-15
Electrical and Electronic Equipment Assemblers	NA	NA	-30	-14
Metal Workers and Plastic Workers, All Other	NA	NA	-30	-30
Textile Bleaching and Dyeing Machine Operators and Tenders	140	110	-30	-21
Textile Knitting and Weaving Machine Setters, Operators, and Tenders	110	80	-30	-27
Textile, Apparel, and Furnishings Workers, All Other	110	80	-30	-27
Photographic Processing Machine Operators	60	30	-30	-50
Weighers, Measurers, Checkers, and Samplers, Recordkeeping	110	90	-20	-18
Computer Operators	100	80	-20	-20
Fishers and Related Fishing Workers	190	170	-20	-11
Textile Cutting Machine Setters, Operators, and Tenders	50	30	-20	-40
Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	240	220	-20	-8
Paper Goods Machine Setters, Operators, and Tenders	100	80	-20	-20
Machine Feeders and Offbearers	140	120	-20	-14

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

Source: Alabama Department of Industrial Relations 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 10.14 shows skill types and definitions as provided by O*NET Online, which offers skill sets for all occupations ranked by the degree of importance. High-earning occupations typically require skills that are obtained in the pursuit of the high educational attainment levels that such jobs require. Lower earning occupations require more basic skill sets. Some occupations have no minimum skill set requirements (e.g. dishwashers and maids).

Table 10.15 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 10.15 does not address such cross-occupational skill importance comparisons. In general, basic skills are most frequently listed as primary, which means that they are important for practically all jobs.

Table 10.14 Skill Types and Definitions

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

Table 10.15 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	68	59	58
Active Listening	78	77	70
Critical Thinking	68	62	76
Learning Strategies	28	33	8
Mathematics	30	23	26
Monitoring	30	26	30
Reading Comprehension	90	85	76
Science	13	5	26
Speaking	73	74	56
Writing	53	44	36
Complex Problem Solving Skills			
Complex Problem Solving	13	10	26
Resource Management Skills			
Management of Financial Resources	0	0	12
Management of Material Resources	0	0	2
Management of Personnel Resources	8	3	14
Time Management	58	56	50
Social Skills			
Coordination	30	36	34
Instructing	53	54	22
Negotiation	0	0	12
Persuasion	0	0	12
Service Orientation	38	41	12
Social Perceptiveness	48	49	12
Systems Skills			
Judgment and Decision Making	25	28	56
Systems Analysis	5	5	6
Systems Evaluation	5	0	18
Technical Skills			
Equipment Maintenance	10	13	0
Equipment Selection	18	18	4
Installation	10	13	0
Operation and Control	8	8	6
Operation Monitoring	8	8	4
Operations Analysis	8	5	10
Programming	5	5	2
Quality Control Analysis	8	5	0
Repairing	8	10	0
Technology Design	8	8	2
Troubleshooting	13	15	4

Note: Rounding errors may be present.

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

High-earning occupations require more critical thinking, science, complex problem solving, resource management, systems, and two social (persuasion and negotiation) skills than both high-demand and fast-growing jobs. These are skills that require long training periods and postsecondary education. However, high-earning jobs require slightly less social and significantly less technical skills. Fast-growing occupations require slightly more social and technical skills than high-demand occupations.

Table 10.16 shows skill gap indexes for all 35 skills in Table 10.14. Skills gap indexes range up to 100 and are standardized measures of the gap between current supply and projected demand. The index does not provide any information about current or base year skill supply. Its focus is on the projection period, which for Table 10.16 is 2006 to 2016, and identifies critical skill needs. The index essentially ranks expected training needs. The higher the index the more critical is the skill over the specified projection period.

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

By skill type the skill gap indexes show that for Region 10 basic skills are most critical followed by social, complex problem solving, resource management, system, 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, science, and social skills; the scale of training should be raised for basic and social skills.

Education and Training Issues

Educational attainment in Region 10 is below that of the state as a whole. About 72 percent of residents age 25 and over had graduated from high school in 2000, compared to 75 percent for Alabama. Of the age 25 and over population, 15 percent had a bachelor's or higher degree versus 19 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 10.17 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; six high-earning occupations do not require a bachelor's or higher degree. Twenty (50 percent) of the 40 high-demand occupations require at least an associate degree and fourteen (35 percent) require a bachelor's or higher degree. Twelve (31 percent) of the 39 fast-growing occupations require an associate degree at the minimum, with eight (21 percent) requiring a bachelor's or higher degree.

The 2006 to 2016 occupational projections indicate that 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 751 occupations and occupational categories, 64 are expected to decline over the period and education and training for these should slow accordingly.

Table 10.16 Skills Gap Indexes (Base Year 2006 to Projected Year 2016)

Skill	Total Openings (Projected Demand)	Replacement Index	Skills Gap Index
Reading Comprehension	2,365	59	100
Active Listening	2,310	60	97
Critical Thinking	2,065	61	94
Speaking	1,845	60	91
Active Learning	1,855	60	88
Coordination	1,745	61	85
Instructing	1,740	59	82
Monitoring	1,665	61	79
Writing	1,605	61	76
Time Management	1,540	60	73
Learning Strategies	1,525	60	70
Social Perceptiveness	1,435	59	67
Service Orientation	1,240	59	64
Persuasion	1,060	63	61
Identification of Key Causes	1,070	63	58
Complex Problem Solving	995	62	55
Mathematics	925	62	52
Equipment Selection	800	59	50
Equipment Maintenance	605	59	47
Troubleshooting	495	60	41
Management of Personnel Resources	600	66	41
Negotiation	530	70	38
Installation	360	57	35
Repairing	310	55	32
Management of Financial Resources	330	65	29
Operations Analysis	250	64	26
Operation Monitoring	340	71	23
Science	195	56	20
Quality Control	240	63	17
Systems Evaluation	210	64	14
Technology Design	95	53	11
Operation and Control	270	69	8
Judgment and Decision Making	110	64	5
Management of Material Resources	185	73	2
Programming	30	33	0

Source: Alabama Department of Industrial Relations.

Table 10.17 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
First Professional Degree	2	0	11
Doctoral Degree	0	0	0
Master's Degree	2	2	3
Work Experience Plus a Bachelor's or Higher Degree	1	0	12
Bachelor's Degree	9	6	18
Associate Degree	6	4	2
Postsecondary Vocational Training	4	5	1
Work Experience in a Related Occupation	2	2	3
Long-term On-the-job Training	1	1	0
Moderate-term On-the-job Training	5	5	0
Short-term On-the-job Training	8	14	0

Note: The last three education and training requirements categories are based on the length of time it generally takes an average worker to achieve proficiency for occupations in which postsecondary training is usually not needed for entry. **Long-term** requires more than 12 months on-the-job training that can include up to four years of apprenticeship, formal classroom instruction, and short-term employer-sponsored training. Trainees are generally considered to be employed in the occupation. **Moderate-term** requires one to 12 months on-the-job experience and informal training. **Short-term** requires up to one month on-the-job experience and training.

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

Implications and Recommendations

From a 2006 base, a 3,532-worker surplus for 2016 and a 13,326-worker shortfall for 2025 are expected (Table 10.18). A focus on worker skills must be a priority through 2016, after which both skills and the expected shortfall must be priorities for 2025. Worker shortfalls for critical occupations will need to be continuously addressed through 2025.

Table 10.18 Expected Worker Shortfall

	2006-2016	2006-2025
Total population growth (percent)	7.8	12.7
Age 20-64 population growth (percent)	6.3	6.0
Job growth (percent)	4.0	14.8
Worker shortfall (percent)	-2.3	8.8
Worker shortfall (number)	-3,532	13,326

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

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

Improving education is vital because a highly educated and productive workforce is a critical economic development asset. The educational and training requirements of high-demand, fast-growing, and high-earning occupations show the significance of education in developing the workforce of the future. The importance of basic skills generally and for high-demand, high-growth, and high-earning jobs demonstrates a strong need for training in these skills. In Region 10 the pace of training needs to increase for technical, science, and social skills while the scale of training is 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 21 sharp-declining occupations in Table 10.13 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 below average population growth rate may hinder its ability to meet long term 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 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 10.5), 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 will 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 is an effective economic development strategy, especially for a region that has fairly low population and labor force growth rates as well as a low per capita income. Together, workforce development and economic development can build a strong, well-diversified economy. Indeed, one cannot achieve success without the other.