

State of the Workforce Report IV: Region 1

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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 1



October 2009

by

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Summary

- This report analyzes workforce supply and demand issues using available metrics of workforce characteristics for Workforce Development Region 1 and presents implications and recommendations.
- Region 1 had a 10.4 percent unemployment rate in May 2009, with 10,688 unemployed. An underemployment rate of 21.0 percent for 2009 means that the region has a 29,900-strong available labor pool that includes 19,224 underemployed workers who are looking for better jobs and are willing to commute farther and longer for such jobs.
- More job opportunities reduced net out-commuting from 3,587 in 2000 to 1,849 in 2006, but increased commuting within the region is worsening congestion, which could slow economic development. This implies that continuous maintenance and development of transportation infrastructure and systems is important.
- By sector, the top five employers in the region are manufacturing, retail trade, health care and social assistance, accommodation and food services, and educational services. In the third quarter of 2008 these five industries provided 52,748 jobs, 65 percent of the regional total. Three of the leading employers had wages that were above the region's average monthly wage of \$2,604, but they were not the highest paying sectors. Economic development should still aim to diversify and strengthen the region's economy by retaining, expanding, and attracting more high-wage providing industries; workforce development should focus on preparing workers for these industries.
- On average 4,266 jobs were created per quarter from second quarter 2001 to third quarter 2008; quarterly net job flows averaged 240. Job creation is the number of new jobs that are created either by new businesses or through expansion of existing firms. Net job flows reflect the difference between current and previous employment at all businesses.
- The top five high-demand occupations are Retail Salespersons; Helpers--Production Workers; Welders, Cutters, Solderers, and Brazers; Customer Service Representatives; and Elementary School Teachers, Except Special Education.
- The top five fast-growing occupations are Rail Car Repairers; Electrical and Electronic Engineering Technicians; Welders, Cutters, Solderers, and Brazers; Painters, Transportation Equipment; and Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders.
- The top 50 high-earning occupations are mainly in management, health, engineering, and legal fields and have a minimum salary of \$52,995. Seven of the top 10 are health occupations and the remaining three are in management.
- Of the top 40 high-demand, the top 29 fast-growing, and 50 high-earning occupations, two belong to all three categories; Sales Managers and Pharmacists. Six occupations are both high-demand and high-earning. Twenty-seven occupations are both high-demand and fast-growing.

- Of the region's 722 occupations and occupational categories, 74 are expected to decline over the 2006 to 2016 period. Nineteen occupations are expected to sharply decline by at least 8 percent, with each losing a minimum of 20 jobs. Education and training for these 19 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 1 both the pace and scale of training needs to increase for basic and social skills. Ideally, all high school graduates should possess basic skills so that postsecondary and higher education can focus on other and more complex skills. 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 worker surplus of almost 800 for 2016 and a worker shortfall of about 7,300 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 addressed continuously. Strategies to address skill needs and worker shortfalls might include: (1) improvements in education and its funding; (2) use of economic opportunities to attract new residents; (3) focus on hard-to-serve populations (e.g. out-of-school youth); (4) lowering the high school dropout rate; (5) continuation and enhancement of programs to assess, retrain, and place dislocated workers; (6) encouragement of older worker participation in the labor force; and (7) facilitation of in-commuting.
- Improving education is important because (i) a highly educated and productive workforce is a critical economic development asset, (ii) productivity rises with education, (iii) educated people are more likely to work, and (iv) it yields high private and social rates of return on investment. Workforce development must view all of education and other programs (e.g. adult education, career technical training, worker retraining, career readiness, etc.) as one system. Funding to support workforce development may require tax reform at state and local levels and should provide for flexibility as workforce needs change over time and demand different priorities. Publicizing both private and public returns to education can encourage individuals to raise their own educational attainment levels, while also promoting public and legislative support for education.
- Higher incomes that come with improved educational attainment and work skills will help to increase personal income for the region as well as raise additional local (county and city) tax revenues. This is especially important for a region that has low population and labor force growth rates.
- Together, workforce development and economic development can build a strong, well-diversified Region 1 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 1.1 shows labor force information for Region 1 and its five counties for 2008 and May 2009.¹

Table 1.1 Region 1 Labor Force Information

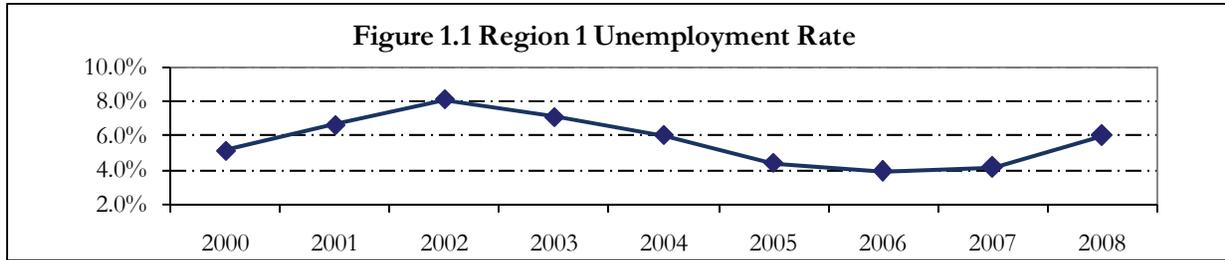
	2008			
	Labor Force	Employed	Unemployed	Rate (%)
Colbert	25,072	23,612	1,460	5.8
Franklin	13,299	12,413	886	6.7
Lauderdale	42,545	40,356	2,189	5.1
Marion	12,698	11,789	909	7.2
Winston	10,000	9,221	779	7.8
Region 1	103,614	97,391	6,223	6.0
Alabama	2,162,479	2,053,502	108,977	5.0
United States	154,287,000	145,362,000	8,924,000	5.8
	May 2009			
	Labor Force	Employed	Unemployed	Rate (%)
Colbert	24,757	22,384	2,373	9.6
Franklin	13,151	11,624	1,527	11.6
Lauderdale	41,876	38,258	3,618	8.6
Marion	12,784	11,011	1,774	13.9
Winston	9,749	8,353	1,396	14.3
Region 1	102,317	91,630	10,688	10.4
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 5.1 percent to 7.8 percent for 2008 (6.0 percent for the region) to between 8.6 percent and 14.3 percent in May 2009, with 10.4 percent for the region. Lauderdale County had the lowest unemployment rate and was the only county with a rate below the state's 8.8 percent. Unemployment was the highest in Winston County.

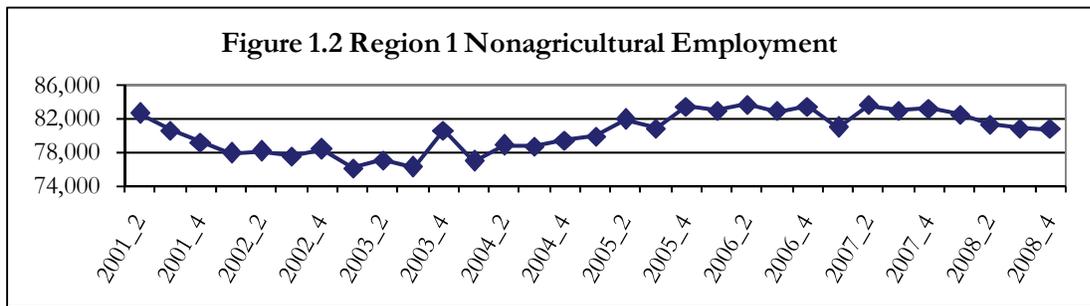
Annual unemployment rates for 2000 to 2008 are shown in Figure 1.1. The region's unemployment rates were low before the 2001 and the most recent recession. The 2002 high of 8.1 percent was due to the effects of the 2001 recession and the closure of some plants. Employment gains since 2003 resulting from successful state and local economic development efforts brought unemployment to record lows in 2006 and 2007. Year-to-date monthly labor force data point to a higher regional unemployment rate for 2009 than the 6.0 percent seen in 2008; the recession is expected to keep unemployment high for a few more years.

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.



Source: Alabama Department of Industrial Relations.

Nonagricultural employment of the region’s residents averaged 80,447 quarterly from the second quarter of 2001 to the fourth quarter of 2008 (Figure 1.2). The number of jobs has been declining steadily since the fourth quarter of 2007.



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

Table 1.2 shows worker distribution by age in Region 1 for the third quarter of 2008. Older workers, age 45 and over, are 40 percent of the region’s nonagricultural employment. This compares well with the state’s 39.9 percent. However, the region has more workers who are age 65 and over, 4.1 percent versus 3.7 percent for the state. To meet long term occupational projections for growth and replacement, labor force participation of younger residents must increase. Otherwise older workers may have to work longer.

Table 1.2 Workers by Age Group Q3 2008

	Nonagricultural Employment	
	Number	Percent
14-18	2,863	3.5
19-24	10,459	12.9
25-34	16,651	20.6
35-44	18,534	22.9
45-54	18,190	22.5
55-64	10,863	13.4
65+	3,301	4.1
45 and over total	32,354	40.0
Total all ages	80,864	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 more residents commuted out of the region for work than nonresidents who commuted in (Table 1.3). Commuter outflow exceeded inflow by about 3,600 people. By 2006, more people were commuting but net commuter outflow had shrunk to about half the 2000 level. The significant increase in number of commuters together with commuting inside the region points to rising congestion in the region. Table 1.3 also shows the one-way average commute time and distance for workers in various years; commute time and distance rose sharply in 2009. All of this suggests that transportation infrastructure and systems must be maintained and developed properly in order to ensure that the flow of goods and the movement of workers are not interrupted. Impeding the mobility of workers and goods can delay or slow economic development.

Table 1.3 Commuting Patterns

Area	Inflow, 2000		Outflow, 2000	
	Number	Percent	Number	Percent
Colbert	1,490	17.1	2,365	19.2
Franklin	1,059	12.2	1,357	11.0
Lauderdale	2,074	23.8	4,767	38.8
Marion	2,230	25.6	1,618	13.2
Winston	1,860	21.3	2,193	17.8
Region 1	8,713	100.0	12,300	100.0

	Inflow, 2006		Outflow, 2006	
	Number	Percent	Number	Percent
Region 1	20,435	100.0	22,284	100.0

	Percent of workers			
	2004	2005/2006	2008	2009
Average commute time (one-way)				
Less than 20 minutes	62.5	64.8	65.9	51.7
20 to 40 minutes	23.0	21.3	21.6	23.3
40 minutes to an hour	6.5	4.2	5.5	13.3
More than an hour	3.6	3.5	3.4	5.0
Average commute distance (one-way)				
Less than 10 miles	53.7	55.5	54.7	44.6
10 to 25 miles	25.2	28.7	29.6	25.0
25 to 45 miles	10.7	5.2	5.2	21.4
More than 45 miles	5.8	4.2	4.2	7.1

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 1 population estimate of 228,031 for 2008 is 1.0 percent less than was recorded for 2000 (Table 1.4). Population grew in Lauderdale County and shrank in the other four. However, the region's population is projected to grow 0.5 percent in this decade to about 231,400 by 2010. Population growth will be fastest in Lauderdale County and slowest in Marion.

Table 1.4 Region 1 Population

	1990 Census	2000 Census	2008 Estimate	% Change 2000-2008	2010 Projected	% Change 2000-2010
Colbert	51,666	54,984	54,663	-0.6	55,131	0.3
Franklin	27,814	31,223	30,801	-1.4	31,497	0.9
Lauderdale	79,661	87,966	89,128	1.3	90,444	2.8
Marion	29,830	31,214	29,465	-5.6	29,688	-4.9
Winston	22,053	24,843	23,974	-3.5	24,629	-0.9
Region 1	211,024	230,230	228,031	-1.0	231,389	0.5
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 1.5 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.

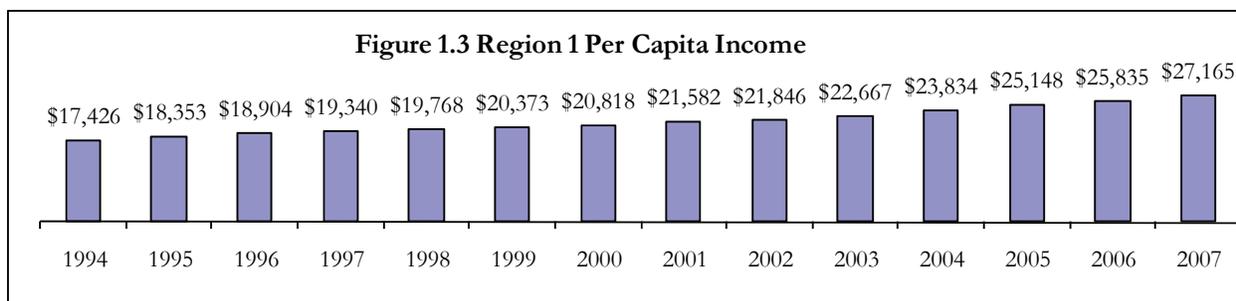
Table 1.5 Population by Age Group (2000-2006) and Projections

Age Group	2000	2006	2016	2025
0-19	60,271	57,663	57,622	59,238
20-24	14,426	14,926	15,725	15,442
25-29	14,896	13,181	14,757	14,770
30-34	15,324	14,036	14,329	15,300
35-39	17,133	15,109	13,966	15,463
40-44	17,121	16,508	15,146	15,321
45-49	16,031	16,784	16,002	14,650
50-54	15,422	15,744	17,217	16,101
55-59	13,199	14,802	17,048	16,340
60-64	11,569	12,767	15,534	17,252
65+	34,838	35,340	42,512	50,912
20-64 Total	135,121	133,859	139,724	140,639
Total Population	230,230	226,861	239,858	250,788
<i>Change from 2006</i>				
0-19			-0.1%	2.7%
20-64			4.4%	5.1%
Total Population			5.7%	10.5%

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 1 was \$27,165 in 2007 (Figure 1.3), up 56 percent from 1994, but about \$5,250 below the state average of \$32,419. Lauderdale County had the highest PCI with \$28,669; Winston County had the lowest with \$24,690.



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

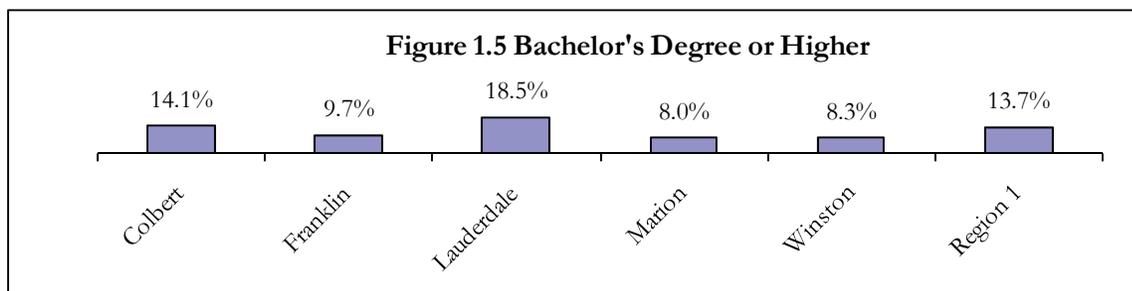
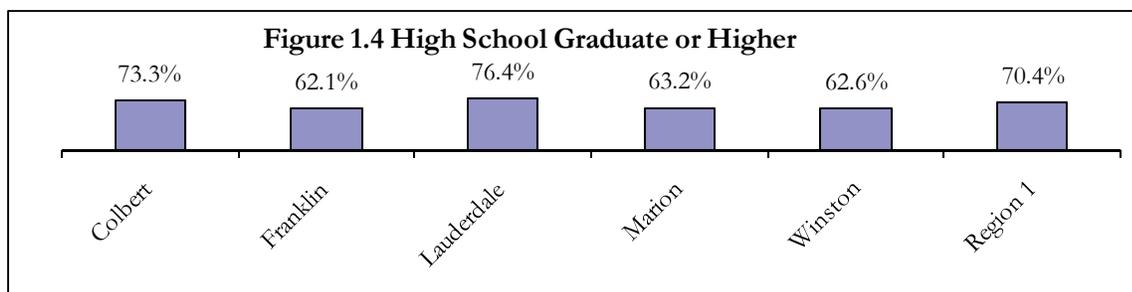
Educational Attainment

Educational attainment in 2000 of Region 1 residents who were 25 years old and over is shown in Table 1.6 and Figures 1.4 and 1.5. About 70 percent graduated from high school and nearly 14 percent held a bachelor's or higher degree. Lauderdale and Colbert counties have higher educational attainment than the other three. Educational attainment is important as skills rise with education and high-wage jobs for the 21st century demand more skill sets.

Table 1.6 Educational Attainment in 2000, Population 25 Years and Over

	Colbert	Franklin	Lauderdale	Marion	Winston	Region 1
Total	37,384	20,860	58,894	21,611	17,078	155,827
No schooling completed	418	482	420	304	343	1,967
Nursery to 4th grade	225	388	296	270	283	1,462
5th and 6th grade	812	793	1,158	835	784	4,382
7th and 8th grade	1,701	1,493	3,184	1,856	1,290	9,524
9th grade	1,691	1,607	2,294	1,182	1,099	7,873
10th grade	2,014	1,342	2,577	1,390	1,270	8,593
11th grade	1,614	980	2,066	1,225	729	6,614
12th grade, no diploma	1,497	819	1,920	900	589	5,725
High school graduate/equivalent	12,665	6,363	20,105	7,107	5,855	52,095
Some college, less than 1 year	2,326	1,366	3,681	1,454	1,077	9,904
Some college, 1+ years, no degree	5,289	2,270	7,784	2,315	1,797	19,455
Associate degree	1,859	936	2,528	1,054	551	6,928
Bachelor's degree	3,298	1,237	7,018	1,057	746	13,356
Master's degree	1,399	573	2,689	447	416	5,524
Professional school degree	370	168	691	189	198	1,616
Doctorate degree	206	43	483	26	51	809

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 1 had an underemployment rate of 21.0 percent in 2009. Applying this rate to May 2009 labor force data means that 19,224 employed residents were underemployed (Table 1.7). Adding the unemployed gives a total available labor pool of about 29,900 for the region. This is 2.8 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 17.9 percent for Lauderdale County to 27.6 percent for Colbert. Lauderdale County had the largest available labor pool and Winston had the smallest.

Table 1.7 Underemployed and Available Labor by County

	<u>Region 1</u>	<u>Colbert</u>	<u>Franklin</u>	<u>Lauderdale</u>	<u>Marion</u>	<u>Winston</u>
Labor Force	102,317	24,757	13,151	41,876	12,784	9,749
Employed	91,630	22,384	11,624	38,258	11,011	8,353
Underemployment rate	21.0%	27.6%	18.2%	17.9%	21.8%	19.6%
Underemployed workers	19,224	6,176	2,113	6,852	2,403	1,638
Unemployed	10,688	2,373	1,527	3,618	1,774	1,396
Available labor pool	29,912	8,549	3,640	10,470	4,177	3,034

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. In 2009, a total of 618 complete responses were obtained from Region 1. About 46 percent (286 respondents) were employed, of whom 60 stated that they were underemployed. A lack of job opportunities in their area, low wages at available jobs, living too far from jobs, and child care responsibilities are the primary reasons given for being underemployed. Ongoing economic development efforts can help in this regard. Nonworkers cite retirement and disability as the main reasons for their status, but some also cite a lack of job opportunities in their area and low wages as additional key factors. Such workers may become part of the labor force if their problems can be addressed.

A comparison of underemployed workers to the overall workforce in Region 1 shows that:

- Fewer work full-time and more of the part-timers prefer full-time work.
- Fewer hold multiple jobs.
- They commute longer and farther.
- More are in retail and wholesale trade and are typically salespersons.
- They earn less and have lower job tenure.
- Fewer believe their jobs fit well with their education and training, skills, and experience.

- More believe they are qualified for a better job.
- More would leave their current jobs for higher income.
- More are willing to commute longer and farther for a better job.
- Fewer are satisfied with their current jobs.
- More are willing to train for a better job even if they have to pay part or all of the cost.
- More have sought better jobs in the preceding quarter.
- They are younger and have lower educational attainment.
- More are married and more are female.
- About the same share is Hispanic and fewer are white.

Table 1.8 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 (81.9 percent) are satisfied or completely satisfied with their jobs. Workers are most satisfied with the work that they do and least satisfied with the earnings they receive. Clearly, fewer underemployed workers are satisfied with their jobs (61.6 percent). The underemployed are also much more dissatisfied with their earnings.

Workers are generally willing to train for a new or better job, with the underemployed being much more willing (75.5 percent vs. 56.6 percent). However, the willingness to train is strongly influenced by who pays for the cost of training. Workers typically do not wish to pay for the training and so their willingness is highest when the cost is fully borne by government and lowest when the trainee must pay the full costs. In every case of cost burden considered, the underemployed are more willing to train for the new or better job. The results strongly show that workers expect the government to bear at least part of the training cost. This expectation may result from worker awareness of government workforce programs that provide such assistance.

Table 1.8 2009 Job Satisfaction and Willingness to Train (Percent)

Job Satisfaction						
		Completely Dissatisfied	Dissatisfied	Neutral	Satisfied	Completely Satisfied
Employed						
Overall		1.8	2.8	13.3	28.7	53.2
	Earnings	9.1	11.9	19.2	28.0	31.5
	Retention	4.6	3.9	10.8	21.3	57.7
	Work	0.4	2.1	4.2	25.5	66.4
	Hours	4.6	4.9	9.1	23.8	57.0
	Shift	2.8	2.5	7.0	20.6	66.1
	Conditions	2.8	2.8	10.5	24.5	58.7
	Commuting Distance	4.9	3.5	12.2	12.6	65.4
Underemployed						
Overall		3.3	8.3	26.7	23.3	38.3
	Earnings	16.7	31.7	20.0	18.3	13.3
	Retention	8.3	6.7	16.7	26.7	40.0
	Work	1.7	5.0	5.0	36.7	51.7
	Hours	11.7	11.7	13.3	16.7	45.0
	Shift	3.3	6.7	13.3	25.0	50.0
	Conditions	6.7	5.0	13.3	25.0	50.0
	Commuting Distance	6.7	3.3	16.7	16.7	56.7
Willingness to Train						
		Completely Unwilling	Unwilling	Neutral	Willing	Completely Willing
Employed						
For a new or better job		16.7	5.0	21.7	12.7	43.9
	If paid by trainee	46.7	19.0	17.4	8.7	5.4
	If paid by trainee and government	10.9	13.6	32.6	27.2	15.2
	If paid by government	3.8	1.6	8.2	17.9	68.5
Underemployed						
For a new or better job		5.7	5.7	13.2	13.2	62.3
	If paid by trainee	38.0	20.0	22.0	8.0	10.0
	If paid by trainee and government	6.0	10.0	38.0	26.0	20.0
	If paid by government	2.0	0.0	6.0	14.0	78.0

Note: Rounding errors may be present.

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

Workforce Demand

Industry Mix

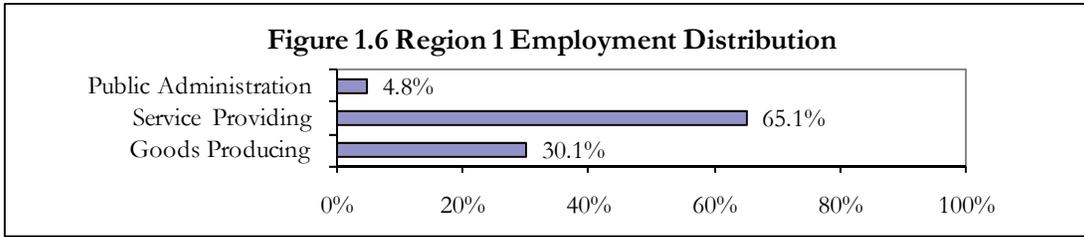
The manufacturing sector was the region's leading employer with 19,206 jobs in the third quarter of 2008 (Table 1.9). Rounding out the top five industries by employment are retail trade, health care and social assistance, accommodation and food services, and educational services. These five industries provided 52,748 jobs, 65.2 percent of the region's total. The average monthly wage across all industries in the region was \$2,604; three of the leading employers paid more than this average. New hire monthly earnings averaged \$1,671, about 64 percent of the region's average monthly wage. The highest average monthly wages were for utilities at \$3,899, mining \$3,820, and wholesale trade \$3,496. Accommodation and food services paid the least at \$1,234. The highest average monthly new hire wages were for mining with \$3,615, utilities at \$2,666, and transportation and warehousing with \$2,481. Accommodation and food services paid newly hired workers the least, \$860.

Table 1.9 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	535	0.66%	18	\$2,850	\$2,305
21 Mining	314	0.39%	19	\$3,820	\$3,615
22 Utilities	891	1.10%	14	\$3,899	\$2,666
23 Construction	4,297	5.31%	6	\$3,169	\$2,481
31-33 Manufacturing	19,206	23.75%	1	\$2,828	\$2,146
42 Wholesale Trade	3,898	4.82%	8	\$3,496	\$2,085
44-45 Retail Trade	10,661	13.18%	2	\$2,028	\$1,243
48-49 Transportation and Warehousing	1,369	1.69%	13	\$3,002	\$2,591
51 Information	759	0.94%	16	\$3,021	\$2,173
52 Finance and Insurance	2,358	2.92%	10	\$3,177	\$1,955
53 Real Estate and Rental and Leasing	849	1.05%	15	\$2,266	\$1,524
54 Professional, Scientific, and Technical Services	2,261	2.80%	11	\$2,702	\$1,824
55 Management of Companies and Enterprises	234	0.29%	20	\$3,048	\$1,500
56 Administrative and Support and Waste Management and Remediation Services	4,035	4.99%	7	\$2,199	\$1,394
61 Educational Services	6,006	7.43%	5	\$2,878	\$1,064
62 Health Care and Social Assistance	10,141	12.54%	3	\$2,708	\$1,803
71 Arts, Entertainment, and Recreation	601	0.74%	17	\$1,436	\$962
72 Accommodation and Food Services	6,734	8.33%	4	\$1,234	\$860
81 Other Services (Except Public Administration)	1,823	2.25%	12	\$1,965	\$1,387
92 Public Administration	3,892	4.81%	9	\$2,529	\$1,506
ALL INDUSTRIES	80,863	100.00%		\$2,604	\$1,671

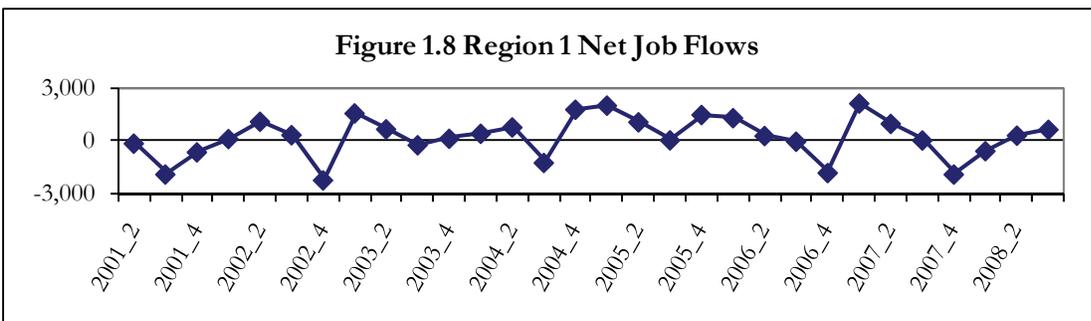
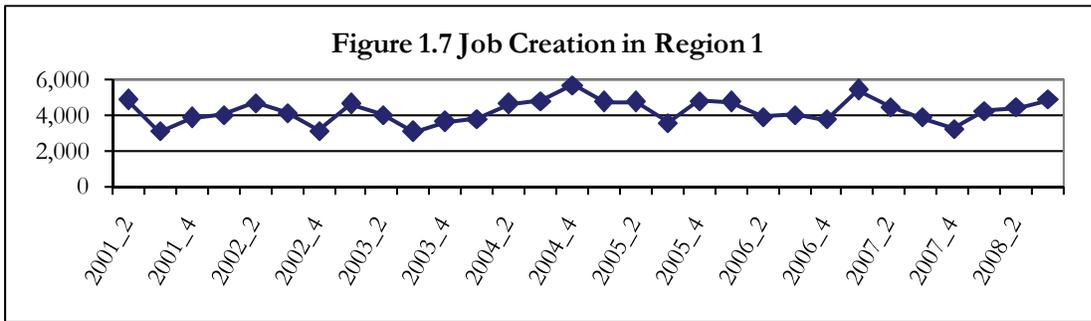
Source: Alabama Department of Industrial Relations and U.S. Census Bureau.

By broad industry classification, service providing industries generated 65 percent of jobs in third quarter 2008 (Figure 1.6). Goods producing industries were next with about 30 percent and public administration accounted for nearly 5 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, 4,266 jobs were created per quarter from second quarter 2001 to third quarter 2008. Figure 1.7 shows job creation on an upswing for the first three quarters of 2008. However, average quarterly net job flows was close to zero for those three quarters (Figure 1.8). From second quarter 2001 to third quarter 2008 quarterly net job flows averaged 240 and generally followed the job creation trend. Quarterly net job flows over the period have fluctuated between a loss of 2,190 to a gain of 2,141. 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 722 occupations and occupational categories in the region, 606 are single occupations. Table 1.10 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 four of the five largest employment sectors identified earlier in Table 1.9: manufacturing; retail trade; health care and social assistance; and educational services. Thus, these sectors will continue to dominate employment in the region.

The top five high-demand occupations are Retail Salespersons; Helpers--Production Workers; Welders, Cutters, Solderers, and Brazers; Customer Service Representatives; and Elementary School Teachers, Except Special Education. Twenty-seven of the high-demand occupations are also fast-growing. This means that these 27 occupations have a minimum annual growth rate of 1.93 percent, much faster than the regional and state occupational growth rates of 0.94 percent and 1.4 percent, respectively.

The 29 fastest growing occupations ranked by projected growth of employment are listed in Table 1.11. More than half of these occupations are health or manufacturing-related. The top five fast-growing occupations are Rail Car Repairers; Electrical and Electronic Engineering Technicians; Welders, Cutters, Solderers, and Brazers; Painters, Transportation Equipment; and Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders.

Table 1.12 shows the 50 selected highest earning occupations in the region. These occupations are mainly in health, management, engineering, and legal fields. Seven of the top 10 listed are health occupations and the remaining three are in management. Any discussion of earnings must consider that wages vary with experience. Occupations with the highest entry wages may not necessarily have the highest average or experienced wages.

The selected high-earning occupations are generally not fast-growing or in high-demand. Six occupations are both high-earning and in high-demand (Table 1.10). The following two occupations are in high-demand, fast-growing, and high-earning:

1. Sales Managers
2. Pharmacists

Of the region's 722 occupations and occupational categories, 74 are expected to decline over the 2006 to 2016 period. Employment in the 19 sharpest-declining occupations will fall by at least 8 percent, with each losing a minimum of 20 jobs over the period (Table 1.13). 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 1.10 Selected High-Demand Occupations (Base Year 2006 and Projected Year 2016)

Occupation	Average Annual Job Openings		
	Total	Due to Growth	Due to Separations
Retail Salespersons	130	50	80
Helpers--Production Workers	80	35	45
Welders, Cutters, Solderers, and Brazers *	55	45	10
Customer Service Representatives *	55	25	30
Elementary School Teachers, Except Special Education	55	25	30
Registered Nurses	55	30	25
Meat, Poultry, and Fish Cutters and Trimmers	50	20	30
Child Care Workers	35	15	20
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	35	15	20
Pharmacy Technicians *	20	10	10
Clergy *	20	15	5
Home Health Aides *	20	15	5
Rail Car Repairers *	15	15	0
Painters, Transportation Equipment *	15	10	5
Medical Assistants *	15	10	5
Maintenance and Repair Workers, General	15	15	0
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders *	10	5	5
Dental Assistants *	10	5	5
Special Education Teachers, Preschool, Kindergarten, and Elementary School *	10	5	5
Helpers--Installation, Maintenance, and Repair Workers *	10	5	5
Anesthesiologists *	10	5	5
Directors, Religious Activities and Education *	10	5	5
Pharmacists *	10	5	5
Dental Hygienists *	10	5	5
Correctional Officers and Jailers *	10	5	5
Social and Human Service Assistants *	10	5	5
Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic *	10	5	5
Bus and Truck Mechanics and Diesel Engine Specialists *	10	5	5
English Language and Literature Teachers, Postsecondary	10	5	5
Child, Family, and School Social Workers	10	5	5
Industrial Production Managers	10	5	5
Insurance Sales Agents	10	5	5
Electrical and Electronic Engineering Technicians *	5	5	0
Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders *	5	5	0
Medical and Public Health Social Workers *	5	5	0
Emergency Medical Technicians and Paramedics *	5	5	0
Rehabilitation Counselors *	5	5	0
Vocational Education Teachers, Postsecondary *	5	5	0
Sales Managers *	5	0	5
Financial Managers	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 1.11 Selected Fast-Growing Occupations (Base Year 2006 and Projected Year 2016)

Occupation	Employment		Percent Change	Annual Growth (Percent)	Average Annual Job Openings
	2006	2016			
Rail Car Repairers *	20	170	750	23.86	15
Electrical and Electronic Engineering Technicians *	NA	NA	100	7.18	5
Welders, Cutters, Solderers, and Brazers *	450	880	96	6.94	55
Painters, Transportation Equipment *	140	250	79	5.97	15
Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders *	40	60	50	4.14	5
Medical and Public Health Social Workers *	110	150	36	3.15	5
Emergency Medical Technicians and Paramedics *	140	190	36	3.10	5
Pharmacy Technicians *	330	440	33	2.92	20
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders *	NA	NA	33	2.92	10
Medical Assistants *	220	290	32	2.80	15
Clergy *	500	650	30	2.66	20
Rehabilitation Counselors *	70	90	29	2.54	5
Dental Assistants *	140	180	29	2.54	10
Home Health Aides *	540	690	28	2.48	20
Special Ed. Teachers, Preschool, Kindergarten, and Elementary School *	110	140	27	2.44	10
Helpers--Installation, Maintenance, and Repair Workers *	110	140	27	2.44	10
Anesthesiologists *	NA	NA	26	2.36	10
Tire Repairers and Changers	NA	NA	25	2.26	5
Directors, Religious Activities and Education *	120	150	25	2.26	10
Customer Service Representatives *	1,080	1,350	25	2.26	55
Vocational Education Teachers, Postsecondary *	NA	NA	25	2.26	5
Pharmacists *	210	260	24	2.16	10
Dental Hygienists *	170	210	24	2.14	10
Correctional Officers and Jailers *	130	160	23	2.10	10
Social and Human Service Assistants *	220	270	23	2.07	10
Sales Managers *	140	170	21	1.96	5
Multiple Mach. Tool Setters, Operators, and Tenders, Metal and Plastic *	280	340	21	1.96	10
Counter and Rental Clerks	280	340	21	1.96	15
Bus and Truck Mechanics and Diesel Engine Specialists *	190	230	21	1.93	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 1.12 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			
Obstetricians and Gynecologists	20	20	0.00	0	225,518
Surgeons	30	40	2.92	0	218,794
Physicians and Surgeons, All Other	110	140	2.44	5	217,900
Family and General Practitioners	NA	NA	1.18	0	180,509
Physician Assistants	NA	NA	0.00	0	167,186
Chief Executives	200	220	0.96	5	153,531
Personal Financial Advisors	50	60	1.84	0	121,185
Veterinarians	30	40	2.92	0	110,538
Pharmacists *	210	260	2.16	10	104,404
Sales Managers *	140	170	1.96	5	97,877
Lawyers	250	280	1.14	10	88,073
Purchasing Managers	30	30	0.00	0	87,935
Engineers, All Other	50	50	0.00	0	86,568
Environmental Engineers	NA	NA	2.92	0	85,116
Sales and Related Workers, All Other	NA	NA	3.42	0	83,579
Property, Real Estate, and Community Association Managers	150	160	0.65	0	83,427
General and Operations Managers	1,110	1,140	0.27	30	83,055
Engineering Managers	50	70	3.42	0	81,546
Computer and Information Systems Managers	30	30	0.00	0	79,996
Financial Managers *	150	180	1.84	5	78,672
Electrical Engineers	40	50	2.26	0	74,174
Education Administrators, Elementary and Secondary School	140	160	1.34	5	73,821
Industrial Production Managers *	120	140	1.55	10	73,721
Judges, Magistrate Judges, and Magistrates	20	20	0.00	0	73,051
Medical and Health Services Managers	140	160	1.34	5	71,720
Insurance Sales Agents *	180	210	1.55	10	69,494
Sales Representatives, Wholesale & Mfg., Technical and Scientific Products	NA	NA	2.92	0	68,972
Mechanical Engineers	50	50	0.00	0	67,312
Human Resources Managers, All Other	30	30	0.00	0	66,636
Occupational Therapists	20	20	0.00	0	64,601
Business Operations Specialists, All Other	150	180	1.84	5	64,395
Market Research Analysts	30	30	0.00	0	64,099
Industrial Engineers	80	90	1.18	0	63,605
Pipelayers	30	40	2.92	0	62,277
Postmasters and Mail Superintendents	30	30	0.00	0	62,053
Managers, All Other	490	510	0.40	10	61,981
Civil Engineers	110	120	0.87	5	61,727
Physical Therapists	30	40	2.92	0	61,643
Loan Officers	120	130	0.80	0	61,600
Construction Managers	330	350	0.59	5	60,662
First-Line Supervisors/Managers of Non-Retail Sales Workers	300	320	0.65	5	58,879
Computer Systems Analysts	80	80	0.00	0	58,638
Foresters	30	30	0.00	0	58,475
Telecom. Equipment Installers and Repairers, Except Line Installers	80	80	0.00	0	57,359
Administrative Services Managers	70	70	0.00	0	57,004
First-Line Supervisors/Managers of Police and Detectives	50	50	0.00	0	56,921
Transportation, Storage, and Distribution Managers	40	40	0.00	0	56,918
Electrical Power-Line Installers and Repairers	130	140	0.74	5	56,447
Computer Programmers	60	60	0.00	0	54,434
Registered Nurses *	1,600	1,880	1.63	55	52,995

Note: Employment and salaries 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 1.13 Selected Sharp-Declining Occupations (Base Year 2006 and Projected Year 2016)

Occupation	Employment		Net Change	Percent Change
	2006	2016		
Farmers and Ranchers	1,310	1,160	-150	-11
Sewing Machine Operators	590	450	-140	-24
Packers and Packers, Hand	790	730	-60	-8
Agricultural Workers, All Other	320	270	-50	-16
Pourers and Casters, Metal	NA	NA	-40	-33
Order Clerks	150	110	-40	-27
Cutting, Punching, and Press Machine Setters, Operators, Metal and Plastic	350	310	-40	-11
Upholsterers	NA	NA	-30	-17
Machine Feeders and Offbearers	NA	NA	-30	-14
Grinding, Lap., Polishing, Tool Setters, Operators, Metal and Plastic	180	150	-30	-17
Electrical and Electronics Repair., Commercial and Industrial Equipment	NA	NA	-20	-29
Metal-Refining Furnace Operators and Tenders	NA	NA	-20	-50
Switchboard Operators, Including Answering Service	140	120	-20	-14
File Clerks	60	40	-20	-33
New Accounts Clerks	90	70	-20	-22
Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	70	50	-20	-29
Lathe & Turning Machine Tool Setters, Operators, Metal and Plastic	100	80	-20	-20
Milling & Planing Machine Setters, Operators, Metal and Plastic	80	60	-20	-25
Cutting and Slicing Machine Setters, Operators, and Tenders	210	190	-20	-10

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 1.14 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 1.15 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 1.15 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 1.14 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>

Source: O*NET Online (<http://online.onetcenter.org/skills/>).

Table 1.15 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	48	48	56
Active Listening	73	69	76
Critical Thinking	58	41	68
Learning Strategies	20	17	4
Mathematics	15	17	24
Monitoring	30	24	28
Reading Comprehension	73	69	76
Science	3	3	26
Speaking	65	62	56
Writing	48	48	34
Complex Problem Solving Skills			
Complex Problem Solving	3	0	26
Resource Management Skills			
Management of Financial Resources	3	0	14
Management of Material Resources	3	0	4
Management of Personnel Resources	3	0	14
Time Management	43	38	56
Social Skills			
Coordination	30	28	34
Instructing	43	41	18
Negotiation	5	0	16
Persuasion	10	7	10
Service Orientation	35	34	20
Social Perceptiveness	50	45	20
Systems Skills			
Judgment and Decision Making	25	17	52
Systems Analysis	0	0	4
Systems Evaluation	3	0	12
Technical Skills			
Equipment Maintenance	20	24	2
Equipment Selection	15	21	4
Installation	10	14	2
Operation and Control	13	21	6
Operation Monitoring	13	14	0
Operations Analysis	0	0	8
Programming	0	0	2
Quality Control Analysis	8	10	4
Repairing	10	14	2
Technology Design	0	0	4
Troubleshooting	10	10	8

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 mathematics, science, critical thinking, complex problem solving, resource management, and systems 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 less social skills and technical skills. High-demand occupations require more resource management, social, and systems skills than fast-growing occupations; but less technical skills.

Table 1.16 shows skill gap indexes for all 35 skills in Table 1.14. 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 1.16 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 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 basic and social skills; the scale of training should also be raised for these skills.

Education and Training Issues

Educational attainment in Region 1 is low compared to the state as a whole. Seventy percent of residents age 25 and over have graduated from high school, compared to 75 percent for Alabama. Of that population, almost 14 percent have 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 1.17 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; 12 of the high-earning occupations do not require a bachelor's or higher degree. Seventeen (43 percent) of the 40 high-demand occupations require an associate degree at the minimum and fourteen (35 percent) require a bachelor's or higher degree. Eleven (38 percent) of the 29 fast-growing occupations require an associate degree at the minimum, with nine (31 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 requiring a high school diploma or GED at a minimum. Of the region's 722 occupations and occupational categories, 74 are expected to decline over the period and education and training for these should slow accordingly.

Table 1.16 Skills Gap Indexes (Base Year 2006 and Projected Year 2016)

Skill	Total Openings (Projected Demand)	Replacement Index	Skills Gap Index
Reading Comprehension	1,270	62	100
Active Listening	1,255	64	97
Critical Thinking	1,095	62	94
Active Learning	970	62	91
Speaking	950	62	88
Coordination	925	63	85
Instructing	925	63	82
Monitoring	855	60	79
Learning Strategies	790	59	76
Writing	855	63	73
Social Perceptiveness	810	59	70
Time Management	775	61	67
Service Orientation	655	58	64
Persuasion	580	62	61
Identification of Key Causes	520	63	58
Complex Problem Solving	470	63	55
Mathematics	420	69	52
Equipment Selection	410	67	50
Negotiation	305	62	47
Equipment Maintenance	315	62	44
Management of Personnel Resources	325	71	41
Troubleshooting	250	64	38
Installation	160	63	35
Repairing	180	61	32
Management of Financial Resources	165	64	29
Operation Monitoring	190	71	26
Operations Analysis	90	67	23
Quality Control	130	69	20
Operation and Control	150	73	17
Systems Evaluation	70	79	14
Science	50	60	11
Management of Material Resources	85	82	8
Technology Design	15	67	5
Judgment and Decision Making	10	100	2
Programming	0	0	0

Source: Alabama Department of Industrial Relations.

Table 1.17 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	2	7
Doctoral Degree	0	0	0
Master's Degree	3	2	2
Work Experience Plus a Bachelor's or Higher Degree	3	2	12
Bachelor's Degree	6	3	17
Associate Degree	3	2	1
Postsecondary Vocational Training	2	2	0
Work Experience in a Related Occupation	1	0	6
Long-term On-the-job Training	3	3	2
Moderate-term On-the-job Training	11	9	3
Short-term On-the-job Training	6	4	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 worker surplus of almost 800 for 2016 and a worker shortfall of about 7,300 for 2025 are expected (Table 1.18). 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 addressed through 2025.

Table 1.18 Expected Jobs Shortfall

	2006-2016	2006-2025
Total population growth (percent)	5.7	10.5
Age 20-64 population growth (percent)	4.4	5.1
Job growth (percent)	3.6	12.4
Worker shortfall (percent)	-0.8	7.3
Worker shortfall (number)	-784	7,328

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

Employment is critical to economic development and so strategies to address potential shortfalls must be adopted and implemented. Such strategies should aim at increasing labor force participation, encouraging in-migration, and raising worker productivity. Efforts to address the need for higher labor force participation, higher productivity, and faster labor force growth to meet workforce demand must include: (1) 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 of the high school dropout rate; (5) use of economic opportunities to attract new residents; (6) encouragement of older worker participation in the labor force; and (7) facilitation of in-commuting.

Improving education is 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. The pace and scale of training needs to increase for basic and social skills. Ideally, all high school graduates should possess basic skills so that postsecondary and higher education can focus on other and more complex skills while enhancing these basic skills. Employers should be an integral part of planning for training as they can help identify future skill needs and any existing gaps. Education and training for the 19 sharp-declining occupations in Table 1.13 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 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, child care, infrastructure, etc. may be needed to tap this resource.

In-migration is one way of growing the labor force as it helps population growth. The region's population growth rate is low and may hinder the 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 (see Table 1.5), it becomes even more important that they be active in the workforce. Older worker participation has been rising nationally since the early 1990s. This has been attributed to reasons including:

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

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