State of the Workforce Report IX:
Mobile County

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Alabama Department of Economic and Community Affairs

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June 2015

Center for Business and Economic Research
Culverhouse College of Commerce

University of Alabama Center for Economic Development

Institute for Social Science Research

THE UNIVERSITY OF ALABAMA

State of the Workforce Report IX: Mobile County

June 2015

by

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Contents

Summary

- This report analyzes workforce supply and demand issues using available metrics of workforce characteristics for Mobile County, Alabama and presents implications and recommendations.

- Mobile County had a 6.0 percent unemployment rate in April 2015, with 11,073 unemployed. The underemployment rate was 25.2 percent for 2014. This suggests that the county has a 54,613-strong available labor pool that includes 43,540 underemployed workers who are looking for better jobs.

- Workers are commuting shorter times but longer distances, implying that congestion may have eased in 2014 compared to 2013. The total number of in- and out-commuters rose from 56,021 in 2005 to 78,492 in 2011. This growth, coupled with considerable commuting within the county, requires continuous maintenance and development of transportation infrastructure and systems.

- By sector, the top five employers in the county are health care and social assistance; retail trade; manufacturing; accommodation and food services; and educational services. In the second quarter of 2014, these five industries provided 94,446 jobs, 55.7 percent of the county total. Among the leading employers, manufacturing and educational services had higher wages than the county's $3,287 monthly average. Economic development should continue to diversify and strengthen the county'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, 8,934 jobs were created per quarter from second quarter 2001 to second quarter 2014; quarterly net job flows averaged 854. 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 Registered Nurses; Computer User Support Specialists; Personal Care Aides; Aircraft Mechanics and Service Technicians; and Home Health Aides.

- The top five fast-growing occupations are Personal Care Aides; Physical Therapist Assistants; Diagnostic Medical Sonographers; Aircraft Mechanics and Service Technicians; and Helpers—Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters.

- The top 50 high-earning occupations are mostly in management, engineering, and health fields and have an average salary range of $79,194 to $276,411. Eight of the top 10 are health occupations.

- Of the top 40 high-demand, the top 20 fast-growing, and the top 50 high-earning occupations, only one—Nurse Practitioners—belongs to all three categories. Eight occupations are both high-demand and high-earning and 14 are both high-demand and fast-growing.

- Of the county's 730 occupations, 43 are expected to decline over the 2012 to 2022 period, with 19 occupations expected to decline by at least eight percent and lose a minimum of 10 jobs each. 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. In Mobile County the pace of training must rise for technical and systems 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. Employers should be an integral part of planning for training as they can help identify future skill needs and any existing gaps.

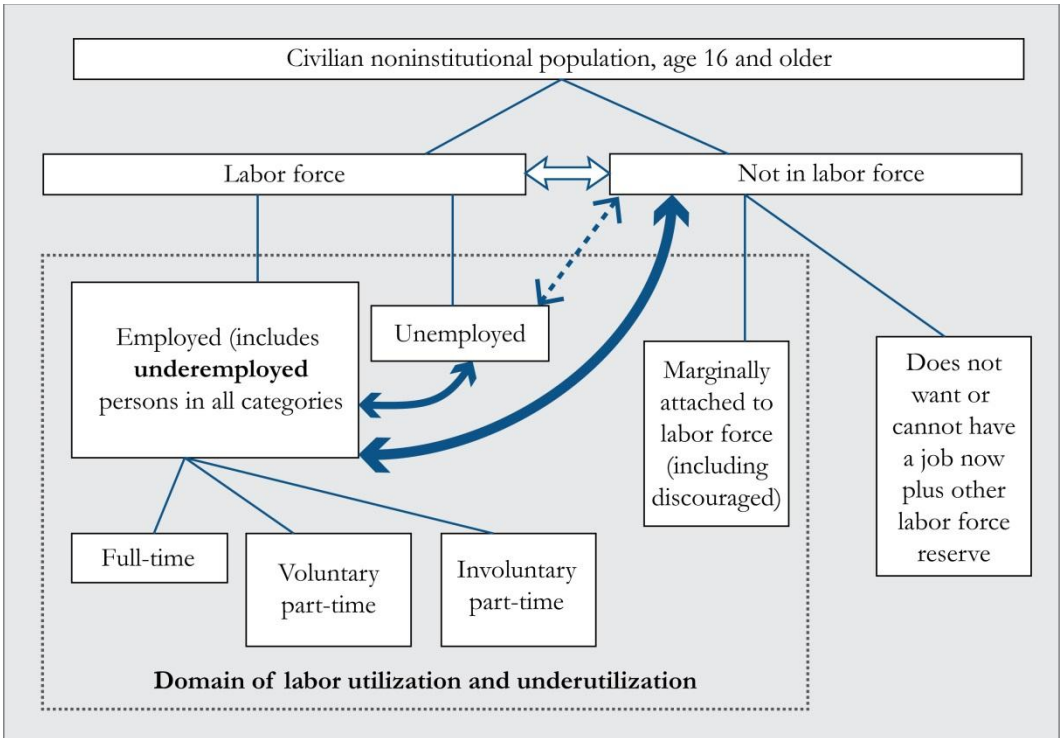
- From a 2012 base, worker shortfalls of about 12,800 and 23,500 are expected for 2022 and 2030, respectively. A focus on worker skills and the expected shortfalls must be a top priority through 2030. Strategies to address skill needs and worker shortfalls could include: (1) improvements in education and its funding; (2) continuation and enhancement of programs to assess, retrain, and place dislocated workers; (3) focus on hard-to-serve populations (e.g. out-of-school youth); (4) lowering the high school dropout rate; (5) use of economic opportunities to attract new and younger residents; (6) encouragement of older worker participation in the labor force; and (7) facilitation of in-commuting.

- Improving education is important because (i) a highly educated and productive workforce is a critical economic development asset, (ii) productivity rises with education, (iii) educated people are more likely to work, and (iv) it yields high private and social returns 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 people to raise their own educational attainment levels, while also promoting public and legislative support for education.

- The higher incomes that come with improved educational attainment and work skills will help to increase personal income for the county as well as raise additional local tax revenues. This is important, especially for a county that has low population and labor force growth rates.

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

Labor Utilization and Supply Flows



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

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

[1] Addy, S.N., Bonnal, M., and Lira, C. (2012). Towards a More Comprehensive Measure of Labor Underutilization: The Alabama Case, *Business Economics*, vol. 47(3).
[2] Canon, M.E., Kudlyak, M., and Reed, M. (2014). Not Everyone Who Joins the Ranks of the Employed was "Unemployed", *The Regional Economist*, January.

Workforce Supply

Labor Force Activity

The labor force includes all persons in the civilian non-institutional population who are age 16 and over and either 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. discouraged workers, students, retirees, and the disabled). Table M.1 shows labor force information on Mobile County for 2014 and for April 2015. Alabama labor force information is available from the Labor Market Information (LMI) Division of the Alabama Department of Labor. LMI compiles data in cooperation with the U.S. Bureau of Labor Statistics. The recession that began in December 2007 sharply increased the number of unemployed and raised the county's unemployment rate to double digit levels. The unemployment rate declined to an average of 7.7 percent for 2014 and 6.0 percent in April 2015.

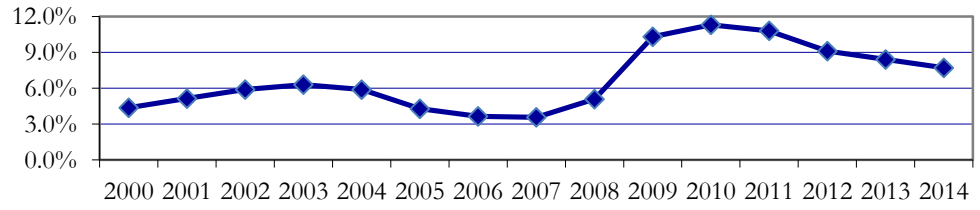
Table M.1 Mobile County Labor Force Information

	2014 Annual Average			
	Labor Force	Employed	Unemployed	Rate (%)
Mobile County	184,133	169,947	14,186	7.7
Alabama	2,150,118	2,003,910	146,208	6.8
United States	155,922,000	146,305,000	9,616,000	6.2
	April 2015			
	Labor Force	Employed	Unemployed	Rate (%)
Mobile County	184,056	172,983	11,073	6.0
Alabama	2,151,559	2,036,483	115,076	5.3
United States	156,554,000	148,587,000	7,966,000	5.1

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

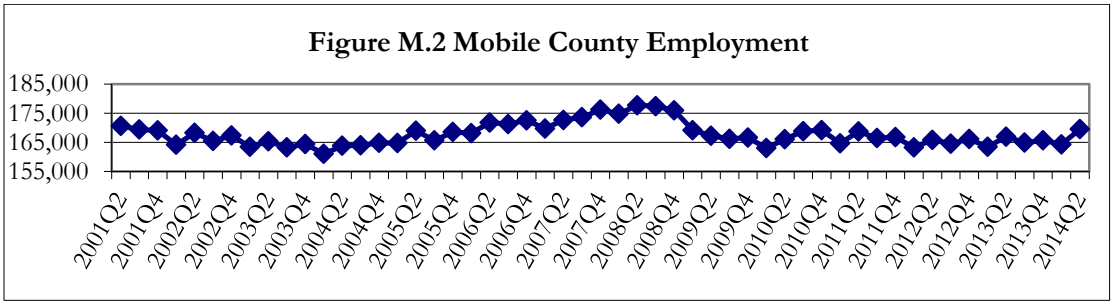
Annual unemployment rates for 2000 to 2014 are shown in Figure M.1. The county's unemployment rose from 4.4 percent in 2000 to 6.3 percent in 2003 primarily because of the 2001 national economic recession. Employment gains resulting from successful economic development efforts at both state and local levels reduced the unemployment rate to a low of 3.6 percent in 2006 and 2007. The last recession raised the county unemployment rate to a high of 11.3 percent in 2010 before it started dropping. The effects of the recession are still keeping unemployment high. The unemployment rate dropped to 8.4 and 7.7 percent in 2013 and 2014, respectively. The year-to-date monthly labor force data point to a lower, but still high, county unemployment rate for 2015.

Figure M.1 Mobile County Unemployment Rate



Source: Alabama Department of Labor.

Nonagricultural employment in the county averaged 167,791 quarterly from the second quarter of 2001 to the second quarter of 2014 (Figure M.2). Employment declined continuously from the second quarter of 2008 to the third quarter of 2009. Despite showing some sign of improvement in the third quarter of 2010, employment remained low but rose in the second quarter of 2014.



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

Table M.2 shows worker distribution by age in Mobile County for the second quarter of 2014. Older workers, age 55 and over, constitute 21.2 percent of the region's nonagricultural employment, above the state's 20.7 percent. Those who are age 65 and over constitute 4.9 percent of nonagricultural employment, the same as for the state. Labor force participation of younger residents must increase to meet long term occupational projections for growth and replacement or older workers must work longer.

Table M.2 Workers by Age Group (Second Quarter 2014)

Age Group	Nonagricultural Employment	
	Number	Percent
14-18	2,582	1.5
19-24	18,460	10.9
25-34	37,581	22.2
35-44	37,512	22.1
45-54	37,476	22.1
55-64	27,634	16.3
65+	8,315	4.9
55 and over total	35,949	21.2
Total all ages	169,560	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

There were 381 more people commuting into Mobile County for work than commuting out in 2005 (Table M.3). By 2011 net in-commuting was 6,584 and both in- and out-commuting residents grew to 78,492 from 56,021 in 2005. The average commute time dropped in 2014 from 2013 while commute distance rose implying that congestion may have eased. However, congestion will remain a challenge in some parts of the county as the county economy recovers from the effects of the last recession. Transportation infrastructure and systems must be maintained and developed to ensure a smooth flow of goods and movement of workers. Congestion impedes the mobility of workers and goods and can delay or slow economic development.

Table M.3 Commuting Patterns in Mobile County

Year	County Inflow	County Outflow
	Number	Number
2005	28,201	27,820
2006	26,040	32,049
2007	33,333	33,526
2008	36,068	35,259
2009	37,624	35,256
2010	40,829	36,217
2011	42,538	35,954

	Percent of workers							
Average commute time (one-way)	**2005/6**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Less than 20 minutes	53.6	52.3	54.2	52.2	53.8	47.8	48.7	49.7
20 to 40 minutes	35.9	35.5	35	35.1	33.1	38.8	33.9	35.1
40 minutes to an hour	6.5	5.9	5.8	6.8	8.1	6.7	6.7	8.0
More than an hour	0.7	3.1	1.5	1.2	2.5	2.8	4.1	0.7
Average commute distance (one-way)	**2005/6**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Less than 10 miles	49.3	49.8	52.6	48.1	45.0	44.4	47.5	41.1
10 to 25 miles	32.2	29.3	31.9	36.5	42.0	39.5	34.4	41.1
25 to 45 miles	12.0	12.9	9.6	10.4	6.9	10.5	7.7	14.2
More than 45 miles	2.5	5.2	3.6	2.9	4.8	4.0	7.7	1.4

Note: Rounding errors may be present.

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

Population

Mobile County had a population of 412,992 in 2010, up 3.3 percent from 2000 (Table M.4). This population growth is much less than Alabama's 7.5 percent. Similarly, the 2014 population estimates show that the county grew by 0.5 percent since 2010, below the state's 1.5 percent. Table M.5 shows Mobile County's population counts, estimates, and projections by age group. The population aged 65 and over is growing rapidly after the first of the baby boom generation turned 65 in 2011. The prime working age group (20-64) is expected to decline through 2030. This poses a challenge for workforce development. Employment growth is expected to outpace labor force growth in the long term. This presents communities in the county with the opportunity to attract new residents. However, growing the population may require more investment in amenities and infrastructure.

Table M.4 Mobile County Population

	1990 Census	2000 Census	2010 Census	2014 Estimate	Change 2000-2010	% change 2000-2010	Change 2010-2014	% change 2010-2014
Mobile County	378,643	399,843	412,992	415,123	13,149	3.3	2,131	0.5
Alabama	4,040,587	4,447,100	4,779,736	4,849,377	332,636	7.5	69,641	1.5
United States	248,709,873	281,421,906	308,745,538	318,857,056	27,323,632	9.7	10,111,518	3.3

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

Table M.5 Population by Age Group and Projections

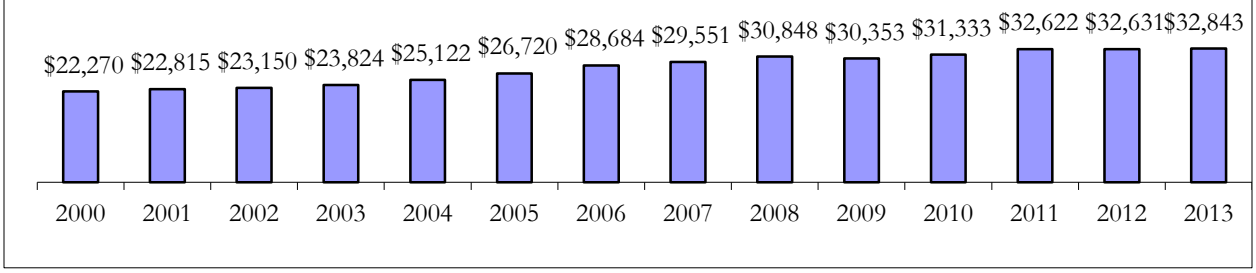
Age Group	2000	2010	2012	2022	2030
0-19	121,942	115,728	112,909	113,821	114,198
20-24	27,932	29,130	30,336	27,519	26,904
25-29	26,886	27,657	27,861	27,813	26,091
30-34	26,370	25,974	26,608	27,274	26,187
35-39	30,022	25,565	24,583	26,378	27,430
40-44	31,335	25,852	25,554	25,638	26,417
45-49	27,670	29,546	27,324	25,131	26,039
50-54	24,800	30,429	30,016	25,048	24,864
55-59	19,165	26,672	28,071	27,033	24,391
60-64	15,802	23,118	24,039	28,269	23,992
65+	47,919	53,321	56,635	74,647	88,455
20-64 Total	229,982	243,943	244,392	240,103	232,315
Total Population	399,843	412,992	413,936	428,571	434,968
Change from 2012					
0-19				0.8%	1.1%
20-64				-1.8%	-4.9%
Total Population				3.5%	5.1%

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

Per Capita Income

Per capita income (PCI) in Mobile County was at $32,843 in 2013 (Figure M.3), up 47.5 percent from 2000, but $3,638 or 10.0 percent below the state average of $36,481.

Figure M.3 Mobile County Per Capita Income

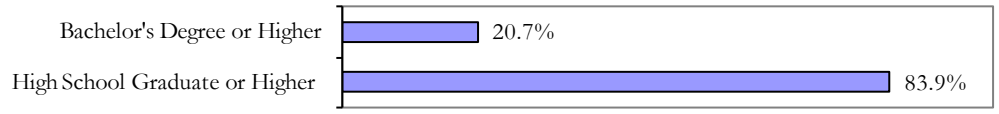


Source: U.S. Bureau of Economic Analysis and Center for Business and Economic Research, The University of Alabama.

Educational Attainment

Educational attainment of Mobile County residents who were 25 years old and over in 2009 to 2013 is shown in Figure M.4 and Table M.6. About 84 percent graduated from high school and 21 percent held a bachelor's or higher degree. The high school diploma attainment above Alabama's 83 percent while the bachelor's or higher degree attainment is lower. Educational attainment is important as skills rise with education and high-wage jobs for the 21st century demand more skill sets.

Figure M.4 Mobile County Educational Attainment, 2009-2013



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

Table M.6 Educational Attainment of Population 25 Years and Over, 2009-2013

	Mobile County
Total	269,898
No schooling completed	3,999
Nursery to 4th grade	919
5th and 6th grade	1,971
7th and 8th grade	5,443
9th grade	6,417
10th grade	8,465
11th grade	10,566
12th grade, no diploma	5,574
High school graduate/equivalent	88,998
Some college, less than 1 year	15,452
Some college, 1+ years, no degree	45,253
Associate degree	20,967
Bachelor's degree	36,855
Master's degree	13,009
Professional school degree	3,617
Doctorate degree	2,393

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.

Mobile County had an underemployment rate of 25.2 percent in 2014. Applying this rate to April 2015 labor force data means that 43,540 employed residents were underemployed (Table M.7). Adding the unemployed gives a total available labor pool of 54,613 for the county. This is almost five times the number of unemployed and is a more realistic measure of the available labor pool in the county. 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. The underemployed workers are willing to commute for farther distances but not for longer times for a better job. For the one-way commute, 38.2 percent are prepared to travel 20 or more minutes longer and 29.4 percent will go 20 or more extra miles. In comparison, 39.5 percent of all employees are willing to travel 20 or more minutes and 28.6 percent will go 20 miles or more for a better job.

Table M.7 Underemployed and Available Labor

	Mobile County
Labor Force	184,056
Employed	172,983
Underemployment rate	25.2%
Underemployed workers	43,540
Unemployed	11,073
Available labor pool	**54,613**

Note: Rounding errors may be present. Based on April 2015 labor force data and 2014 underemployment rates.
Source: Center for Business and Economic Research, The University of Alabama and Alabama Department of Labor.

Underemployment rates for counties, Workforce Development Regions (WDRs), and the state were determined from an extensive survey on the state's workforce. A total of 362 complete responses were obtained from Mobile County. About 42 percent (151 respondents) were employed, of whom 38 stated that they were underemployed. Low wages at available jobs, a lack of job opportunities in

their area, child care responsibilities, other family or personal obligations, and owning a house in their area are the primary reasons given for being underemployed. Ongoing economic development efforts can help in this regard. Nonworkers cite retirement, disability or other health concerns, a lack of job opportunities in their area, and low wages at the available jobs as the main reasons for their status. Such workers may become part of the labor force if their problems can be addressed. Indeed, a recent study found that the flow of labor force nonparticipants to employment status was 60 percent more than that of unemployed workers who gain employment.[3] This implies that the county's available labor pool could be larger than estimated in this report.

A comparison of underemployed workers to the overall workforce in Mobile County shows that:

- Fewer work full-time and more of the part-timers would like to work full-time.
- Slightly more hold multiple jobs.
- They commute shorter times but longer distances.
- More are in education, training, and library; food preparation and serving; sales; office and administrative support; and transportation and material moving occupations.
- They have slightly shorter job tenure and they earn less.
- More are in utilities; wholesale trade; retail trade; transportation and warehousing; and educational services industries.
- Fewer believe their jobs fit well with their education and training and skills.
- More believe they are qualified for a better job.
- More would leave their current jobs for higher income but are not willing to extend their commute time 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 all the training cost.
- Fewer are married and more are female.
- Their median age is three years lower than that of all employees.
- More are Hispanic and more African-American or other nonwhite ethnic groups.
- They are more educated; more have some college, an associate degree, or 4-year college education.

Table M.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 county's workers (75.5 percent) are satisfied or completely satisfied with their jobs. Workers are most satisfied with their work shift and least satisfied with their earnings. Fewer underemployed workers (52.6 percent) are satisfied or completely satisfied with their jobs. The underemployed are also most satisfied with their work shift and very dissatisfied with their earnings.

Workers are generally willing to train for a new or better job, with the underemployed being more willing (82.4 percent vs. 61.3 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

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

pay the full costs. Underemployed workers are more willing to train for a new or better job even if they have to pay the full cost of training. The results show that workers expect the government to help pay for their training. This expectation may result from worker awareness of government workforce programs that provide such assistance.

Table M.8 Job Satisfaction and Willingness to Train (Percent)

	Job Satisfaction				
	Completely Dissatisfied	Dissatisfied	Neutral	Satisfied	Completely Satisfied
Employed					
Overall	3.3	3.3	17.2	28.5	47.0
Earnings	10.6	8.0	28.5	25.2	27.2
Retention	4.6	6.6	13.9	17.2	57.6
Work	1.3	4.0	11.9	21.2	61.6
Hours	4.6	6.0	10.6	18.5	60.3
Shift	3.3	3.3	7.3	16.6	69.5
Conditions	3.3	7.3	13.3	21.2	54.3
Commuting Distance	2.0	4.6	9.9	19.9	62.9
Underemployed					
Overall	10.5	10.5	23.7	26.3	26.3
Earnings	21.1	15.8	31.6	18.4	10.5
Retention	13.2	18.4	26.3	26.3	29.0
Work	2.6	7.9	21.1	23.7	44.7
Hours	13.2	10.5	7.9	21.1	47.4
Shift	5.3	2.6	7.9	18.4	65.8
Conditions	5.3	18.4	15.8	15.8	42.1
Commuting Distance	5.3	5.3	15.8	21.1	52.6

	Willingness to Train				
	Completely Unwilling	Unwilling	Neutral	Willing	Completely Willing
Employed					
For a new or better job	21.0	3.4	12.6	10.9	50.4
If paid by trainee	52.1	14.9	13.8	4.3	11.7
If paid by trainee and government	9.6	11.7	37.2	17.0	18.1
If paid by government	1.1	1.1	10.6	16.0	68.1
Underemployed					
For a new or better job	14.7	0.0	2.9	5.9	76.5
If paid by trainee	41.4	20.7	20.7	6.9	10.3
If paid by trainee and government	3.5	10.3	31.0	27.6	17.2
If paid by government	0.0	0.0	0.0	10.3	82.8

Note: Rounding errors may be present.

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

Workforce Demand

Industry Mix

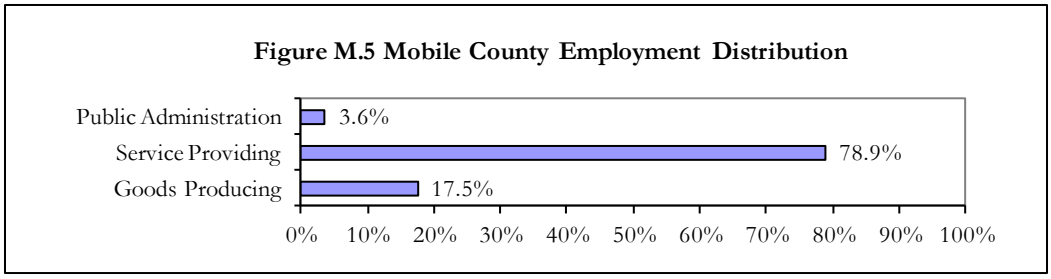
The health care and social assistance sector was the leading employer with 23,141 jobs in the second quarter of 2014 (Table M.9). Rounding out the top five industries by employment are retail trade; manufacturing; accommodation and food services, and educational services. These five industries provided 94,446 jobs, 55.7 percent of the Mobile County total. The average monthly wage across all industries in the county was $3,287; only two of the leading employers—manufacturing and educational services—paid more than this average. New hire monthly earnings averaged $2,393, about 73 percent of the average monthly wage. The highest average monthly wages were for mining at $8,181; manufacturing $5,094, utilities $4,990; and professional, scientific, and technical services $4,824. Accommodation and food services paid the least at $1,226. Mining had the highest average monthly new hire wages with $7,374; followed by construction $4,648 and manufacturing with $3,865. Arts, entertainment, and recreation paid newly hired workers the least, $925.

Table M.9 Industry Mix (Second Quarter 2014)

Industry by 2-digit NAICS Code	Total Employment	Share	Rank	Average Monthly Wage	Average Monthly New Hire Earnings
11 Agriculture, Forestry, Fishing and Hunting	667	0.39%	19	$2,741	$1,836
21 Mining	593	0.35%	20	$8,181	$7,374
22 Utilities	1,354	0.80%	16	$4,990	$3,187
23 Construction	9,841	5.80%	7	$3,608	$4,648
31-33 Manufacturing	18,646	11.00%	3	$5,094	$3,865
42 Wholesale Trade	8,104	4.78%	10	$4,497	$3,645
44-45 Retail Trade	21,717	12.81%	2	$2,145	$1,440
48-49 Transportation and Warehousing	8,816	5.20%	9	$3,922	$3,467
51 Information	2,201	1.30%	15	$4,126	$3,545
52 Finance and Insurance	4,992	2.94%	13	$4,279	$2,810
53 Real Estate and Rental and Leasing	3,116	1.84%	14	$3,142	$2,304
54 Professional, Scientific, and Technical Services	9,318	5.50%	8	$4,824	$3,562
55 Management of Companies and Enterprises	965	0.57%	18	$3,089	$1,904
56 Administrative and Support and Waste Management and Remediation Services	12,390	7.31%	6	$2,262	$2,133
61 Educational Services	15,342	9.05%	5	$3,481	$2,050
62 Health Care and Social Assistance	23,141	13.65%	1	$3,190	$2,258
71 Arts, Entertainment, and Recreation	1,179	0.70%	17	$1,699	$925
72 Accommodation and Food Services	15,600	9.20%	4	$1,226	$1,025
81 Other Services (Except Public Administration)	5,466	3.22%	12	$2,614	$2,089
92 Public Administration	6,114	3.61%	11	$2,722	$1,404
ALL INDUSTRIES	**169,560**	**100.00%**		**$3,287**	**$2,393**

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

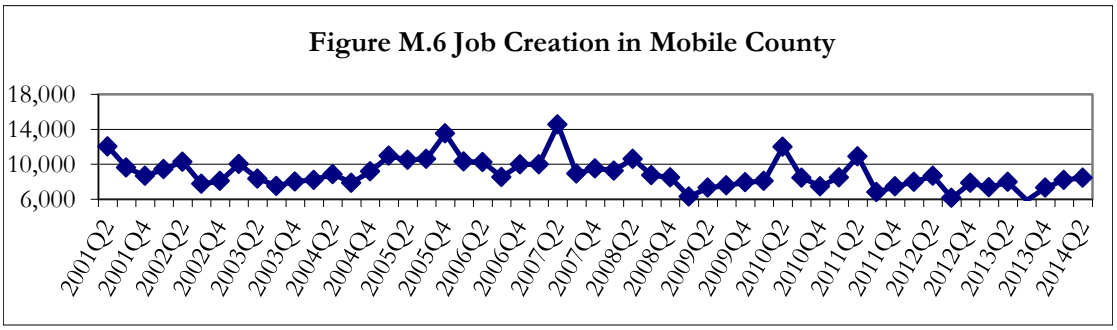
By broad industry classification, service providing industries provided 78.9 percent of all nonagricultural jobs in the county in the second quarter of 2014 (Figure M.5). Goods producing industries were next with 17.5 percent and public administration accounted for 3.6 percent.

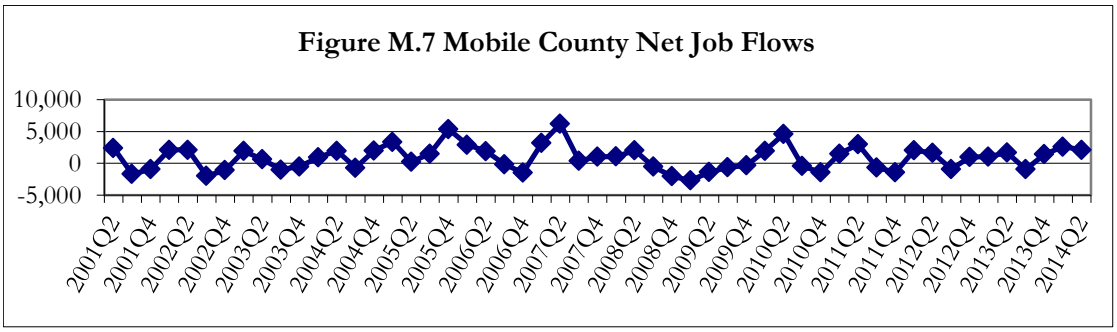


Source: Alabama Department of Labor and U.S. Census Bureau.

Job Creation and Net Job Flows

On average, 8,934 jobs were created per quarter from second quarter 2001 to second quarter 2014 (Figure M.6); quarterly net job flows averaged 854 (Figure M.7). After dropping in the third quarter of 2013, job creation rose in the fourth quarter of 2013 through the second quarter 2014. Net job flows also rose during the same period but dropped in the last quarter. Quarterly net job flows fluctuate considerably and have ranged from a loss of 2,666 to a gain of 6,187. Job creation refers to the number of new jobs that are created either by new area businesses or through the expansion of existing firms. Net job flows reflect the difference between current and previous employment at all businesses.





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

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

There are 730 single occupations in Mobile County. Table M.10 shows the 40 occupations that are expected to be in high-demand, ranked by projected average annual job openings over the 2012 to 2022 period. Many of these occupations are related to health care occupations. This implies that the health care and social assistance industry will continue to dominate employment in the county.

The top five high-demand occupations are Registered Nurses; Computer User Support Specialists; Personal Care Aides; Aircraft Mechanics and Service Technicians; and Home Health Aides. Fourteen of the high-demand occupations are also fast-growing. This means that these 14 occupations have a minimum annual growth rate of 2.61 percent, much faster than the county and state occupational growth rates of 1.17 percent and 0.99 percent, respectively.

The 20 fastest growing occupations ranked by projected growth of employment are listed in Table M.11. Many of these occupations are related to construction and health care sectors. The top five fast-growing occupations are Personal Care Aides; Physical Therapist Assistants; Diagnostic Medical Sonographers; Aircraft Mechanics and Service Technicians; and Helpers—Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters.

Table M.12 shows the 50 selected highest earning occupations in the county. These occupations are mostly in management, engineering, health, and science 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. Eight occupations are both high-earning and in high-demand (Table M.10): Construction Managers; Pharmacists; Computer and Information Systems Managers; Medical and Health Services Managers; Anesthesiologists; Nurse Practitioners; Operations Research Analysts; and Surgeons. Of the 40 high-demand, 20 fastest-growing, and 50 highest earning occupations, only one occupation— Nurse Practitioners—belongs to all three categories.

Of the county's 730 single occupations, 43 are expected to decline over the 2012 to 2022 period. Employment in the 19 sharpest-declining occupations will fall by at least eight percent, with each losing a minimum of 10 jobs over the period (Table M.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 county.

Table M.10 Selected High-Demand Occupations (Base Year 2012 and Projected Year 2022)

Occupation	Average Annual Job Openings		
	Total	Due to Growth	Due to Separations
Registered Nurses	175	90	90
Computer User Support Specialists*	65	45	15
Personal Care Aides*	60	55	5
Aircraft Mechanics and Service Technicians*	40	25	15
Home Health Aides*	35	20	10
First-Line Supervisors of Construction Trades and Extraction Workers	35	25	10
Carpenters	35	25	10
Industrial Machinery Mechanics	30	15	15
Claims Adjusters, Examiners, and Investigators	20	10	10
Construction Managers	**15**	**10**	**10**
Cost Estimators	15	5	10
Database Administrators*	15	10	5
Nursing Instructors and Teachers, Postsecondary	15	10	5
Pharmacists	**15**	**5**	**10**
Physical Therapists*	15	10	5
Dental Hygienists	15	10	5
Diagnostic Medical Sonographers*	15	10	5
Electrical Power-Line Installers and Repairers	15	5	10
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders*	15	10	5
Computer and Information Systems Managers	**10**	**5**	**5**
Medical and Health Services Managers	**10**	**5**	**5**
Management Analysts	10	10	5
Training and Development Specialists	10	5	5
Market Research Analysts and Marketing Specialists*	10	5	0
Computer Systems Analysts	10	10	5
Software Developers, Applications	10	5	0
Computer Network Support Specialists	10	5	5
Clinical, Counseling, and School Psychologists	10	5	5
Biological Science Teachers, Postsecondary	10	5	5
Anesthesiologists	**10**	**5**	**5**
Nurse Practitioners*	**10**	**5**	**5**
Physical Therapist Assistants*	10	10	5
Cargo and Freight Agents	10	5	5
Software Developers, Systems Software*	5	5	0
Operations Research Analysts	**5**	**5**	**0**
Health Specialties Teachers, Postsecondary	5	0	0
Surgeons	**5**	**0**	**0**
Physician Assistants	5	0	0
Occupational Therapists*	5	5	0
Medical Equipment Repairers*	5	5	5

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

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

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

Table M.11 Selected Fast-Growing Occupations (Base Year 2012 and Projected Year 2022)

Occupation	Employment		Percent Change	Annual Growth (Percent)	Average Annual Job Openings
	2012	2022			
Personal Care Aides*	1,010	1,55	53	4.38	60
Physical Therapist Assistants*	170	260	48	4.34	10
Diagnostic Medical Sonographers*	200	300	47	4.14	15
Aircraft Mechanics and Service Technicians*	530	780	47	3.94	40
Helpers—Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	90	130	40	3.75	5
Computer User Support Specialists*	1,070	1,53	42	3.64	65
Physical Therapists*	200	280	43	3.42	15
Avionics Technicians	NA	NA	35	3.42	5
Database Administrators*	230	320	39	3.36	15
Home Health Aides*	590	810	37	3.22	35
Brickmasons and Blockmasons	110	150	37	3.15	5
Market Research Analysts and Marketing Specialists*	180	240	33	2.92	10
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders*	NA	NA	34	2.92	15
Helpers--Electricians	340	450	33	2.84	15
Psychiatric Aides	590	780	32	2.83	30
Software Developers, Systems Software*	160	210	32	2.76	5
Psychiatric Technicians	NA	NA	35	2.72	5
Occupational Therapists*	100	130	40	2.66	5
Medical Equipment Repairers*	100	130	32	2.66	5
Nurse Practitioners*	**170**	**220**	**33**	**2.61**	**10**

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

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

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

Table M.12 Selected High-Earning Occupations (Base Year 2012 and Projected Year 2022)

Occupation	Employment		Annual Growth (Percent)	Average Annual Job Openings	Mean Annual Salary ($)
	2012	2022			
Anesthesiologists*	190	240	2.36	10	276,411
Surgeons*	60	70	1.55	5	271,444
Obstetricians and Gynecologists	50	60	1.84	0	256,035
Chief Executives	130	140	0.74	5	219,368
Psychiatrists	30	40	2.92	0	217,453
Pediatricians, General	30	40	2.92	0	195,136
Physicians and Surgeons, All Other	560	680	1.96	25	176,005
Dentists, General	110	130	1.68	5	173,375
Family and General Practitioners	30	30	0.00	0	161,641
Sales Engineers	NA	NA	0.00	0	153,753
Internists, General	70	80	1.34	5	149,140
Pharmacists*	390	460	1.66	15	132,781
Education Administrators, Postsecondary	220	250	1.29	10	128,658
Lawyers	810	910	1.17	20	128,194
Architectural and Engineering Managers	250	280	1.14	10	121,509
General and Operations Managers	2,890	3,280	1.27	95	119,794
Marketing Managers	NA	NA	2.92	0	118,484
Financial Managers	360	410	1.31	10	112,930
Industrial Production Managers	350	370	0.56	10	111,775
Sales Managers	170	190	1.12	5	109,875
Purchasing Managers	60	60	0.00	0	108,418
Medical and Health Services Managers*	220	270	2.07	10	106,127
Computer and Information Systems Managers*	210	260	2.16	10	104,306
Natural Sciences Managers	20	20	0.00	0	102,428
Personal Financial Advisors	160	200	2.26	5	101,375
Operations Research Analysts*	NA	NA	3.42	5	100,781
Chemical Engineers	140	160	1.34	5	98,599
Transportation, Storage, and Distribution Managers	100	110	0.96	5	98,490
Optometrists	30	40	2.92	0	94,125
Human Resources Managers	80	100	2.26	5	93,555
Electronics Engineers, Except Computer	120	140	1.55	5	93,454
Veterinarians	80	100	2.26	5	92,230
Computer Science Teachers, Postsecondary	NA	NA	0.00	0	91,715
Administrative Services Managers	90	100	1.06	0	91,595
Managers, All Other	590	650	0.97	20	90,968
Public Relations and Fundraising Managers	50	60	1.84	0	89,725
Electrical Engineers	270	290	0.72	10	89,277
Mechanical Engineers	260	270	0.38	10	87,245
Business Teachers, Postsecondary	70	80	1.34	0	87,203
Construction Managers*	470	570	1.95	15	87,097
Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	50	50	0.00	0	86,728
Nurse Practitioners*	**170**	**220**	**2.61**	**10**	**85,101**
Compensation and Benefits Managers	NA	NA	4.14	0	84,784
Industrial Engineers	360	390	0.80	15	84,637
Architects, Except Landscape and Naval	90	100	1.06	5	83,837
Securities, Commodities, and Financial Services Sales Agents	190	200	0.51	5	83,689
Captains, Mates, and Pilots of Water Vessels	310	360	1.51	20	82,076
Education Administrators, Elementary and Secondary School	270	280	0.36	10	80,540
First-Line Supervisors of Non-Retail Sales Workers	640	650	0.16	10	79,335
Civil Engineers	530	610	1.42	20	79,194

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

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

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

Table M.13 Selected Sharp-Declining Occupations (Base Year 2012 and Projected Year 2022)

Occupation	Employment		Net Change	Percent Change
	2012	2022		
Farmers, Ranchers, and Other Agricultural Managers	2,320	1,850	-470	-20
Postal Service Mail Carriers	370	270	-100	-28
Postal Service Mail Sorters, Processors, and Processing Machine Operators	170	120	-50	-31
Data Entry Keyers	320	270	-50	-16
Paper Goods Machine Setters, Operators, and Tenders	NA	NA	-40	-10
Postal Service Clerks	90	60	-30	-33
Switchboard Operators, Including Answering Service	NA	NA	-20	-11
Chemical Plant and System Operators	NA	NA	-20	-8
Editors	NA	NA	-20	-21
Advertising Sales Agents	NA	NA	-20	-9
Floral Designers	100	80	-20	-14
Word Processors and Typists	NA	NA	-10	-19
Reporters and Correspondents	60	50	-10	-22
Printing Press Operators	150	140	-10	-9
Power Plant Operators	NA	NA	-10	-9
Computer Operators	120	110	-10	-8
Locomotive Firers	NA	NA	-10	-42
Logging Equipment Operators	60	50	-10	-13
Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	NA	NA	-10	-15

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

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

Skills and Skills Gap Analyses

Jobs require skill sets and it is necessary that jobholders have the relevant skills. Table M.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 M.15 shows the percentage of selected occupations in the county 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 M.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 M.14 Skill Types and Definitions

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

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

Active Listening — Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

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

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

Mathematics — Using mathematics to solve problems.

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

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

Science — Using scientific rules and methods to solve problems.

Speaking — Talking to others to convey information effectively.

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

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

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

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

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

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

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

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

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

Coordination — Adjusting actions in relation to others' actions.

Instructing — Teaching others how to do something.

Negotiation — Bringing others together and trying to reconcile differences.

Persuasion — Persuading others to change their minds or behavior.

Service Orientation — Actively looking for ways to help people.

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

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

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

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

Systems Evaluation — Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.

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

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

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

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

Operation and Control — Controlling operations of equipment or systems.

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

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

Programming — Writing computer programs for various purposes.

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

Repairing — Repairing machines or systems using the needed tools.

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

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

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

Table M.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	38	40	46
Active Listening	88	80	84
Critical Thinking	93	100	86
Learning Strategies	10	0	6
Mathematics	10	5	10
Monitoring	73	85	50
Reading Comprehension	78	65	78
Science	15	10	28
Speaking	80	80	82
Writing	45	25	52
Complex Problem Solving Skills			
Complex Problem Solving	58	40	64
Resource Management Skills			
Management of Financial Resources	3	0	2
Management of Material Resources	0	0	0
Management of Personnel Resources	8	0	22
Time Management	23	35	20
Social Skills			
Coordination	38	45	36
Instructing	23	25	8
Negotiation	3	5	10
Persuasion	5	5	14
Service Orientation	25	35	12
Social Perceptiveness	45	50	44
Systems Skills			
Judgment and Decision Making	60	60	82
Systems Analysis	18	5	8
Systems Evaluation	8	0	4
Technical Skills			
Equipment Maintenance	8	15	0
Equipment Selection	3	0	0
Installation	0	0	0
Operation and Control	10	15	0
Operation Monitoring	13	20	0
Operations Analysis	8	5	12
Programming	5	0	0
Quality Control Analysis	10	25	0
Repairing	8	20	0
Technology Design	0	0	0
Troubleshooting	13	20	0

Note: Rounding errors may be present.

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

High-earning occupations require more active learning, science, speaking, writing, personnel resource management, complex problem solving, negotiation, persuasion, judgment and decision making, and operations analysis skills than both high-demand and fast-growing jobs. Many of these skills typically require long training periods and postsecondary education. However, high-earning jobs require significantly lower technical skills except for operations analysis. Fast-growing and high-demand occupations require generally similar skills, although high-demand jobs use more basic, complex problem solving, and systems skills.

Table M.16 shows skill gap indexes for all 35 skills in Table M.14 based on a previous projections period (2008 to 2018). Although the skills gap indexes are for a previous projection period, they are applicable to current projections. Skills gap indexes range up to 100 and are standardized measures of the gap between current supply and projected demand. The index does not provide any information about current or base year skill supply. Its focus is on the projection period and it identifies critical skill needs. The index essentially ranks expected training needs. The higher the index the more critical the skill is 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, technical, and systems skills. The importance of basic skills generally and for high-demand, high-growth, and high-earning jobs indicates a strong need for training in these skills. The pace of training needs to increase for technical and systems skills; the scale of training should be raised for basic and social skills.

Education and Training Issues

Educational attainment in Mobile County is comparable to that of the state as a whole. About 84 percent of residents age 25 and over had graduated from high school in 2009 to 2013, compared to 83 percent for Alabama. About 21 percent had a bachelor's or higher degree versus 23 percent for the state. Skills and education requirements for jobs keep rising and so there is a need to raise educational attainment in the county.

Table M.17 shows the number of selected occupations in the county for which a particular education/training category is most common. In general, high-earning occupations require high educational attainment levels and only three of the 50 high-earning occupations do not require a bachelor's or higher degree. Twenty-nine (73 percent) of the 40 high-demand occupations require at least an associate degree and 23 (58 percent) require a bachelor's or higher degree. Ten (50 percent) of the 20 fast-growing occupations require an associate's degree at the minimum, with six (30 percent) requiring a bachelor's or higher degree.

The 2012 to 2022 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 county's 730 occupations, 43 are expected to decline over the period. The 19 sharpest-declining occupations will decline by at least eight percent, with each losing a minimum of 10 jobs. Education and training for these occupations should slow accordingly.

Table M.16 Skills Gap Indexes (Base Year 2008 to Projected Year 2018)

Skill	Total Openings (Projected Demand)	Replacement Index	Skills Gap Index
Reading Comprehension	3,640	59	100
Active Listening	3,640	58	97
Critical Thinking	3,315	60	94
Speaking	2,855	59	91
Active Learning	2,845	58	89
Coordination	2,820	59	86
Instructing	2,525	59	83
Monitoring	2,540	59	80
Time Management	2,470	58	77
Writing	2,465	60	74
Learning Strategies	2,220	59	71
Social Perceptiveness	2,165	61	69
Service Orientation	1,830	58	66
Judgment and Decision Making	1,735	59	63
Mathematics	1,575	57	60
Complex Problem Identification	1,435	57	57
Persuasion	1,625	63	54
Equipment Selection	1,275	54	51
Troubleshooting	915	55	49
Equipment Maintenance	865	57	46
Management of Personnel Resources	905	66	43
Installation	705	54	40
Negotiation	875	69	37
Repairing	565	56	34
Operation Monitoring	565	59	31
Management of Financial Resources	520	68	29
Operation and Control	405	58	26
Quality Control	335	52	23
Operations Analysis	350	63	20
Systems Evaluation	275	56	17
Science	205	61	14
Systems Analysis	195	54	11
Technology Design	170	50	9
Management of Material Resources	290	78	6
Programming	35	43	3

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

Source: Alabama Department of Labor.

Table M.17 Number of Selected Occupations by Education/Training Requirement

Most Common Education/Training Requirements Categories	Selected High-Demand Occupations	Selected Fast-Growing Occupations	Selected High-Earning Occupations
Doctoral Degree or First Professional Degree	7	1	15
Master's Degree	4	2	3
Bachelor's or Higher Degree Plus Work Experience	5	1	18
Bachelor's Degree	7	2	11
Associate Degree	6	4	0
Postsecondary Non-Degree Plus On-the-job Training	0	1	0
Postsecondary Non-Degree	1	1	0
Some College, no Degree Plus On-the-job Training	1	1	0
Some College, no Degree	0	0	0
High School Diploma Plus On-the-job Training	7	4	0
High School Diploma	0	0	0
Less than High School Plus On-the-job Training	2	3	3
Less than High School	0	0	0

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

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

Implications and Recommendations

Employment is projected to grow faster than the labor force and the population. From a 2012 base, worker shortfalls of 12,833 and 23,538 are expected for 2022 and 2030, respectively (Table M.18). A focus on worker skills and the projected shortfalls must be priorities through 2030. Worker shortfalls for critical occupations will also need to be addressed through 2030. Mobile County is expected to have strong job growth in manufacturing and high-earning jobs given the decision of the plane maker Airbus to build a production plant in the county.

Table M.18 Expected Worker Shortfall

	2012-2022	2012-2030
Total population growth (percent)	3.5	5.1
Age 20-64 population growth (percent)	-1.8	-4.9
Nonagricultural job growth (percent)	5.4	8.3
Worker shortfall (percent)	7.2	13.2
Worker shortfall (number)	12,833	23,538

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. For Mobile County, such strategies should aim at increasing labor force participation, encouraging in-migration, 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. The pace of training needs to increase for technical and systems 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 19 sharp-declining occupations in Table M.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 educational 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 county's relatively low population growth rate may hinder its ability to meet 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 county's economic development successes. Investment in amenities and infrastructure may be needed to support such growth. In-migration is generally more beneficial than in-commuting because 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 county's workforce challenges. Such policies could 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 M.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 county'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 county 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 county that has fairly low population and labor force growth rates. Together, workforce development and economic development can build a strong, well-diversified economy. Indeed, one cannot achieve success without the other.