

A DECADE BEHIND: BREAKING OUT OF THE LOW-SKILL TRAP IN THE SOUTHERN ECONOMY



GEORGETOWN UNIVERSITY



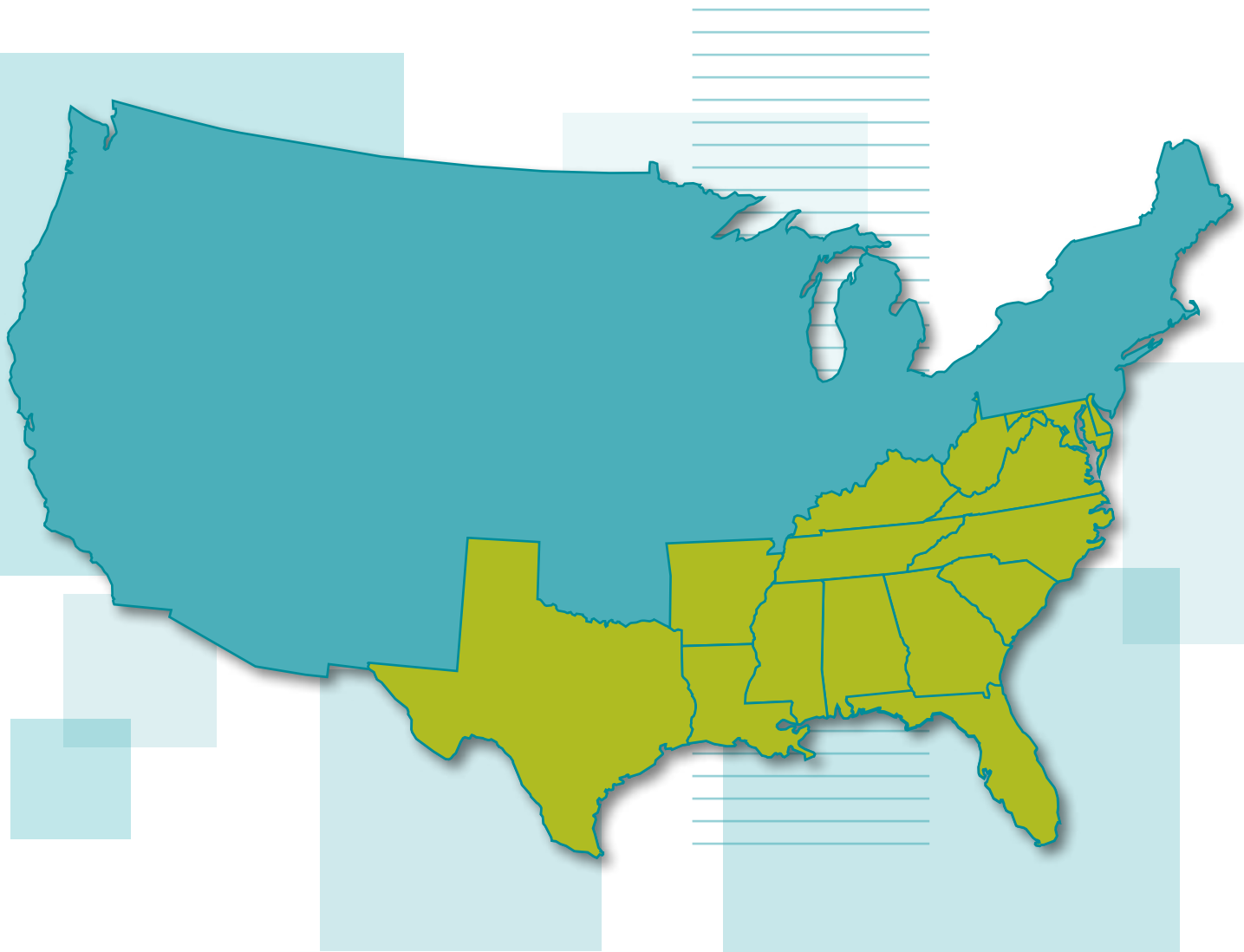
Georgetown Public
Policy Institute

Center on Education and the Workforce

Full Report
July 2012

Anthony P Carnevale
Nicole Smith

A DECADE BEHIND: BREAKING OUT OF THE LOW-SKILL TRAP IN THE SOUTHERN ECONOMY



July 2012

Anthony P Carnevale
Nicole Smith

CONTENTS

Acknowledgements	2
A Decade Behind: Breaking Out of the Low-Skill Trap in the Southern Economy	3
Introduction/Summary	3
It is a chicken-or-the-egg story	5
Recession and Recovery	9
How Many Jobs Will There Be In 2020?	10
Industry Decline, Growth and Rebirth (2010-2020)	11
Brief Note on Methodology	12
Occupation Growth (2010-2020)	14
The South Atlantic States	17
Delaware	17
Maryland	20
District of Columbia	22
Virginia	24
West Virginia	26
North Carolina	28
South Carolina	30
Georgia	31
Florida	33
The South: Eastern States	36
Kentucky	36
Tennessee	37
Mississippi	39
Alabama	41
The South: Western States	43
Oklahoma	43
Texas	45
Arkansas	46
Louisiana	48
Selected References	51
Appendices	57

ACKNOWLEDGEMENTS

We would like to express our gratitude to the individuals and organizations that have made this report possible. First, we thank Lumina Foundation and the Bill and Melinda Gates Foundation for their support of our research over the past few years. This report would not have been possible without the support of Jamie Merisotis, Holly Zanville, Elizabeth Gonzalez, Dewayne Matthews, and Parminder Jassal as well as Hillary Pennington and Ann Person. We are honored to be partners in their mission promoting postsecondary access and completion of all Americans.

We undertook this report to help advance the discussion and understanding of many contentious issues surrounding the South. The South debate has and will continue to stir controversy amongst interested groups. We invited many experts on various sides of this debate to critique this report. Though they sometimes held positions that were diametrically opposed and philosophically divergent from ours, we wish to thank them for their esteemed input. This process of evaluation contributed enormously to our understanding of the environment and forced us to address many methodologically difficult questions much more clearly.

Regional reports are always a challenge, particularly as we struggle to represent complex inter- and intra-state relationships in summary form. We wish to thank the following area-matter experts for contributing enormously to the content:

- Ted Abernathy and Scott Duron for their critical commentary on the role of education in economic development for the South, their analysis of the underlying methodology used in the report for measuring education demand, and for reminding us about the challenges of tying individual skills to high-wage, high-growth jobs that require these skills;
- Norma Noble for her detailed and thoughtful comments on content, as well as her knowledge on specific geography, relevant literature and demographics;
- Ed Franklin for raising the hard questions on policy, and for offering methodological review, additional literature and state-specific information;
- Debra Lyons for her extremely textured and insightful examination of the paper as well as her Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis that helped us to strengthen the overall message.

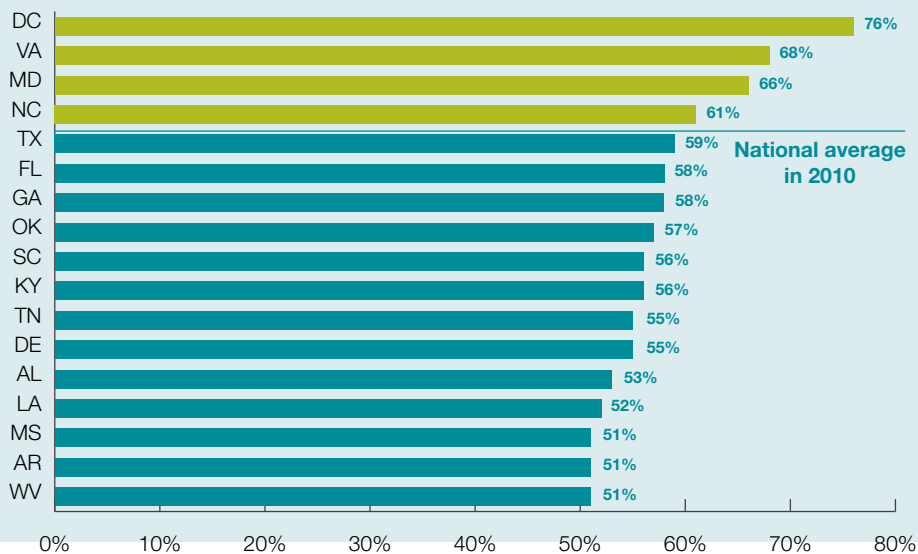
Special thanks to Jeff Strohl for his strong data expertise and to Ben Beach, and Vic Caleca who served as our eagle-eye editors. We want to thank Laura Meyer, Peter Daniels and Artem Gulish for the initial compilation groundwork; Jon Brandt for his bibliographic support; and Ryan Clennan, Studio Grafik for design. Finally, we would like to thank Andrea Porter and Marilyn Downs, who provided support throughout the process.

That said, all errors remain the responsibility of the authors.

A DECADE BEHIND: BREAKING OUT OF THE LOW-SKILL TRAP IN THE SOUTHERN ECONOMY¹

BY 2020, 13 SOUTHERN STATES WOULD NOT HAVE ACHIEVED 2010 NATIONAL POSTSECONDARY AVERAGE

Figure 1: Percent Jobs Requiring Postsecondary Education, 2020



Introduction/Summary

Education demand in the southern states over the next decade will be as diverse as the states themselves. Nationally, we project that by 2020, 66 percent of all jobs will require some form of postsecondary education and training. Washington, D.C., Virginia and Maryland will meet or exceed this average (76%, 68% and 66% respectively). The remaining 13 states will fall below. Today, 59 percent of all jobs require postsecondary education and training nationally. The South average is 54 percent.

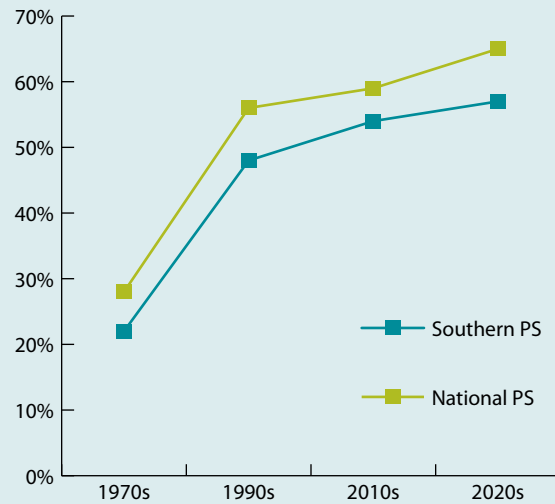
The Southern states are diverse in their physical and economic size, ethnic composition and industrial makeup. Therefore, although it is difficult to classify the South as one cohesive region by any definition, this report presents information on the region's employment and education prospects with the aim of connecting employment needs to resulting education demand.

The educational profiles of the states also vary, though most states rank below the national average. Save for Texas and North Carolina, most southern states will still be striving to reach the 2010 average in 2020.

1. The South as defined by the U. S. Census consists of 16 states (plus Washington, D.C.). Thirty-seven percent of the population of the US is located here along with 36 percent of the nation's jobs. The South produces 35 percent of the nation's real GDP and is projected to account for a slightly larger share of national employment by 2020, increasing by one percent, to over 61.5 million jobs.

OVER TIME, THE DEMAND FOR POSTSECONDARY TALENT CONTINUES TO GROW, BUT THE GAP BETWEEN THE REGION AND THE NATION REMAINS

Figure 2: Education distribution



Source: Center on Education and the Workforce Analysis

Many areas in the South appear to be caught in a low-wage/low-skill equilibrium.²

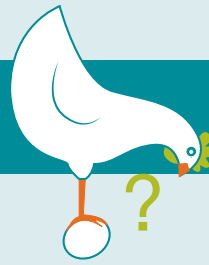
Equilibrium occurs when the forces of supply and demand for skill are balanced at low education and low wage levels. In this scenario the only way to increase either is by introducing an external influence that upsets the market equilibrium.

A low-wage/low-skill equilibrium is a vicious cycle in which low demand for skill in the real economy discourages individuals and employers from developing skill from education, training and on-the-job skill enhancement. The interactive effects of supply and demand for skill discourage human capital development, resulting in slow growth. A low-skill equilibrium is undesirable because both educators and industries become dependent on an economic and technological pathway that discourages human capital development and suppresses wages. It is even worse in an increasingly competitive global economy where competition is based on knowledge and skill.

Breaking out of a low-skill equilibrium is no small feat. States can escape the quandary by producing more postsecondary talent and by modernizing existing industries and attracting new ones. But unless these strategies are carefully coordinated, they are bound to result in a brain drain (the loss of postsecondary talent, training and skill) or a shift to the hiring of out-of-state talent (the loss of opportunity for state residents).

2. Of course low-wage, low-skill equilibria are not unique to the southern states. We find evidence of this phenomenon in many other states in rural and metropolitan areas.

IT IS A CHICKEN-OR-THE-EGG STORY



The availability of intellectually challenging and highly skilled jobs that demand postsecondary education and training is a primary driving force compelling citizens to increase postsecondary attainment. Not only the problem of brain drain³ exists when these jobs are not available but also state legislators have an argument against increasing postsecondary expenditure for their citizens. It is a flawed argument, however, because without a trained workforce, industry will not locate.

The loss of postsecondary talent in many southern states is particularly worrisome. Without the growth of high-skill jobs and high-skill industries, there is little incentive for those with the opportunity to go elsewhere to stay in their home state. And frankly, why should they? During recessions, migration incentives are even stronger.

At the height of the recession, Alabama, Mississippi and West Virginia lost young college graduates because opportunity existed elsewhere. This trend, however, represents a continuation of the movement of young educated adults with at least a bachelor's degree from states with reduced postsecondary job opportunities. Previous surveys confirm that Alabama, Louisiana, Mississippi, Oklahoma and West Virginia experienced similar migrations. In West Virginia and Louisiana, however, the brain drain extends to experienced workers as well.⁴

Over the long term, slow and consistent increases in state postsecondary attainment can attract high-value-added industries.⁵ But in the short term, the available jobs determine the demand for postsecondary talent. As a result, increasing postsecondary attainment without increasing the share of jobs that require postsecondary talent will simply further the brain drain into states where college-level jobs are available. Where brain drain occurs, individual state residents will benefit from investments in higher education, but the state economy will not. In these cases the state fulfills its responsibility to prepare the young for a skill-based economy, but the community never reaps the full benefit.

In cases where states succeed at economic development but don't invest in education, the good jobs tend to go to those educated in other states. In these cases successful economic development doesn't translate into opportunity for state residents. We see evidence of both patterns in the South.

3. Further investment in both K-12 and especially postsecondary education is not the magic pill, but it certainly is a key stepping stone towards the type of economic development which lifts the region out of prolonged stagnation.

4. The BP oil spill and the previous Hurricane Rita/Hurricane Katrina disasters are also known correlates.

5. Retail chains such as Walmart remain top employers in many states.

IN WEST VIRGINIA, YOUNG WORKERS OF ALL EDUCATION LEVELS ARE LEAVING THE STATE. D.C. IS A NET IMPORTER OF COLLEGE GRADUATES ONLY.

Brain Drain 1 (young workers by education type)

	BA + (25-34) Net Exporters (-ve), Net Importer (+ve)	SC/AA (25-34)	HSL (25-34)
Alabama	-594	1276	6873
Arkansas	3530	-96	3704
Delaware	145	-5	-468
District of Columbia	1466	-670	-1168
Florida	6292	8763	1392
Georgia	6821	163	4346
Kentucky	1544	2638	7456
Louisiana	861	472	1309
Maryland	11291	142	2961
Mississippi	-507	1825	128
North Carolina	8161	8777	7055
Oklahoma	579	5216	930
South Carolina	2718	1023	1935
Tennessee	4945	-850	5449
Texas	19339	12005	13999
Virginia	9118	6784	2975

IN GENERAL, LESS EDUCATED MATURE WORKERS ARE MORE LIKELY TO LEAVE THE SOUTHERN STATES. IN LOUISIANA AND WEST VIRGINIA, MORE EDUCATED WORKERS LEAVE.

Brain drain 2 (mature workers by education type)

	BA + (35-64) Net Exporters (-ve), Net Importer (+ve)	SC/AA (35-64)	HSL (35-64)
Alabama	1678	847	4917
Arkansas	900	1979	3711
Delaware	474	730	-526
District of Columbia	1545	-1278	-1781
Florida	17851	13407	11205
Georgia	6520	-2143	-1471
Kentucky	1507	1788	3884
Louisiana	-3238	2359	4039
Maryland	5342	-1754	7452
Mississippi	836	-662	-2212
North Carolina	8459	7361	7221
Oklahoma	3946	1605	2815
South Carolina	4046	1441	2024
Tennessee	2630	2621	855
Texas	27873	14670	21964
Virginia	8295	-2019	4252
West Virginia	-725	1994	533

The educational profile of the South is both a cause and a consequence of the region's industrial and occupational makeup. Further, the industrial makeup of many of the southern states is a major reason why the region has traditionally lagged others in educational attainment, especially in postsecondary attainment. By 2020, 59 percent of the jobs in the South will require postsecondary education and training, compared to 66 percent nationally.⁶ This means that without additional investment, the relatively low levels of education in the Southern workforce can only discourage the development of higher-wage, high-skilled employment.

MANUFACTURING STILL REPRESENTS A SUBSTANTIAL CONTRIBUTOR TO STATE GDP IN THE SOUTH

Table 1: SELECTED STATE INDICATORS (2010/2011)

	Manufacturing as a percentage of real GDP (2010)**	Percentage change in real GDP by state (2009-2010)*	Per capita personal income by state (2010) in 2005 dollars*
Alabama	8	2%	\$33,945
Arkansas	15	3%	\$31,150
Delaware	7	3%	\$69,667
District of Columbia	0	4%	\$71,044
Florida	5	0%	\$39,272
Georgia	11	-1%	\$35,490
Kentucky	17	5%	\$31,883
Louisiana	18	3%	\$33,348
Maryland	6	4%	\$49,025
Mississippi	17	3%	\$31,186
North Carolina	19	4%	\$34,453
Oklahoma	12	4%	\$35,638
South Carolina	16	4%	\$33,163
Tennessee	16	4%	\$35,307
Texas	13	5%	\$36,484
Virginia	9	3%	\$44,746
West Virginia	10	6%	\$32,641
US (Jan 2010)	11	4%	\$39,945

Source: *Bureau of Economic Analysis, NAICS-based real GDP by state statistics,
**Bureau of Labor Statistics

With notable exceptions,⁷ the employment profiles of the Southern states are dominated by low-wage, low-skill industries and occupations. There is also a relative preponderance of slow-growing or declining industries such as those involving natural resources and old-line manufacturing, as well as highly cyclical industries like construction, housing, government and retail trade.⁸ For the past three decades employment levels in natural resources and in manufacturing have steadily

6. Some argue that the increasing demand for postsecondary education stems from the fact that employers are just hiring degrees, but that ignores the fact that employers have been paying more and more for degrees since the early eighties. There is more than a direct correlation between formal education levels and annual wages, which reflect what employers are willing to pay for the knowledge, skills and abilities that workers attain at every consecutive education level. Wages, or annual earnings, are a measure of worker productivity – it's hard to imagine that employers will keep hiring degrees if they were not obtaining commensurate productivity gains. One or two years of mistaken hiring, perhaps, but three decades of poor hiring decisions certainly doesn't characterize a free-market economy.

7. Major exceptions exist. Jobs in Washington, D.C., Virginia, and Maryland are forecasted to exceed the national average in the proportion requiring postsecondary education and training by 2020. The Washington, D.C., workforce leads all states in its concentration of postsecondary human capital.

8. Retail trade and government account for 28 percent of employment in the South. Although government is still projected to grow over the time horizon, it will do so much more slowly than before.

declined. In this recession and the two previous ones, farming, fishing and forestry employment decreased, while mining and petroleum production grew. Both natural resources and manufacturing shed jobs in good times and bad, but the recessions were especially bad for workers in these sectors. Manufacturing in the South is characterized by durables, such as textiles, appliances and furniture. In its 1970s heyday, employment in manufacturing was about 30 percent of the national labor force, with an output of approximately \$100,000 per worker. Today, manufacturing employment in the US stands at 9 percent of the labor force, but boasts an output of \$300,000 per worker. Not only are manufacturing workers three times as productive now, they need more nuanced skills, training and preparation. Manufacturing's success has come at the expense of workers.

Employment in many southern states is more concentrated than the national norm in manufacturing, utilities and transportation. Here, long-term job growth continues to be compromised by productivity growth that increases output, but with relatively fewer workers. Moreover, many southern states rely disproportionately on construction and housing, industries that were hit especially hard by financial collapse. This legacy and a relatively slow rate of economic diversification make the region especially vulnerable in cyclical downturns. The South faces a steeper road to recovery.

Except for D.C., Maryland and Virginia, the southern states have fallen behind. The region lags the rest of the nation by a full 10 years in both high school completion and postsecondary educational attainment.

Demand for postsecondary talent is rising at a slower rate in the South than elsewhere, resulting in much less overall wealth and lower derived public revenue. **We find that if the Southern states doubled their respective shares of workers with a bachelor's degree, they could increase tax revenue between 75 and 150 percent.** Increasing demand for postsecondary talent in the workforce increases wealth and tax revenues disproportionately because of the higher productivity and earnings of a postsecondary-educated workforce.

This report is the third in a series of reports detailing present and future job and education demand for workers, by major census regions. The projections are based on detailed analysis of the industrial and occupational profile of each state, juxtaposed with national forecasts of macroeconomic variables such as GDP growth, inflation, unemployment, and labor force participation.

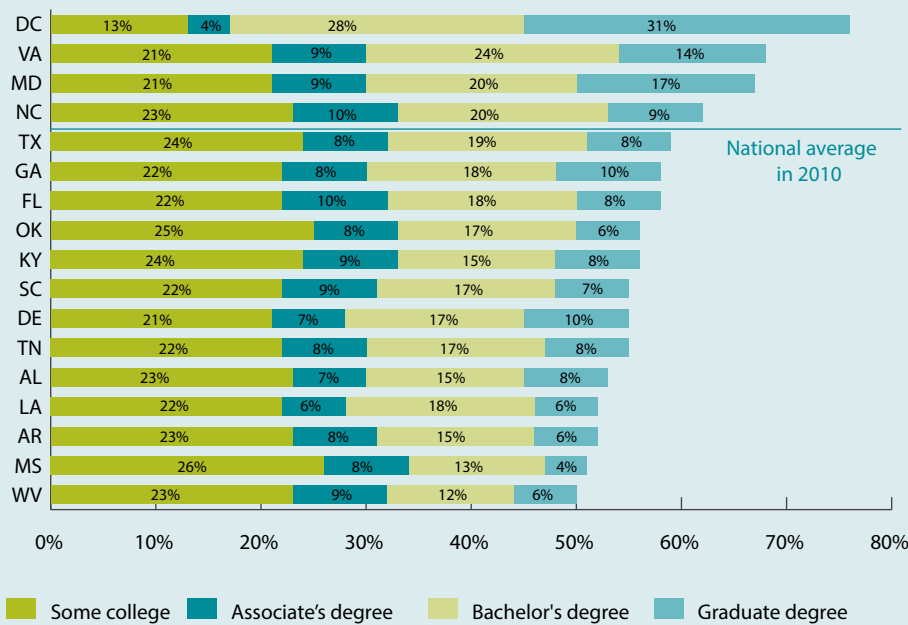
RECESSION AND RECOVERY

When compared to other regions, the loss of jobs in the South during the Great Recession of 2007 has been substantial and painful, mostly due to its industrial composition.

As the Southern region digs out of the recession, key lifelines are being withdrawn, which makes the rebound all the more difficult. Stimulus money has all but dried up and cuts in state budgets continue to limit opportunities in the government sector and in programs supported by government funding.⁹ Recovery has been slower than anticipated, thus presenting additional challenges to governors and state legislators. Future growth in the region, however, still holds promise.

BY EDUCATION LEVEL, POSTSECONDARY CREDENTIALS ARE CONCENTRATED BELOW THE BA FOR SOUTHERN STATES

Figure 4: Percentage of Jobs Requiring Postsecondary Education, 2020 (Details)



9. "Mississippi Economic Review and Outlook" www.mississippi.edu/urc. Jan 2011.

HOW MANY JOBS WILL THERE BE IN 2020?

Jobs in the South are expected to grow by 20 percent from 2010 to 2020. This compares favorably to 15 percent for the region in the previous decade¹⁰ and to the 17 percent projection for the nation.¹¹ Texas, Florida, Virginia and North Carolina are forecast to have the largest increases (26%, 22%, 21% and 21% respectively).

GROWTH IN JOBS IN THE NEXT DECADE WILL BE 60 PERCENT HIGHER THAN THE PREVIOUS DECADE

Table 2: Job Growth for the Southern States (in millions)

	2010 (in millions)	2020 (in millions)	Job Growth (2010-2020)	Comparison Job Growth (1998-2008)
Alabama	2.0	2.4	18%	5%
Arkansas	1.2	1.4	15%	7%
Delaware	0.4	0.5	16%	9%
District of Columbia	0.7	0.8	16%	14%
Florida	8.0	9.7	22%	17%
Georgia	4.2	5.1	20%	10%
Kentucky	1.9	2.1	15%	6%
Louisiana	2.0	2.4	18%	3%
Maryland	2.7	3.2	17%	12%
Mississippi	1.2	1.4	19%	1%
North Carolina	4.1	5.0	21%	10%
Oklahoma	1.7	2.0	17%	11%
South Carolina	2.0	2.3	18%	8%
Tennessee	2.9	3.3	14%	5%
Texas	11.5	14.5	26%	19%
Virginia	3.8	4.6	21%	13%
West Virginia	0.7	0.8	10%	6%
Total	51.1	61.5	20%	12%

10. We chose 1997-2007 as a comparison decade since 2000-2010 is biased downward by the massive job losses in 2008 and 2009.

11. Previous forecasts (2008-2018) projected national job growth at 10 percent. Current forecasts (2010-2020) project national job growth at 17 percent. The stark difference is due to the fact that job losses in the recession were so substantial and protracted that reversion to the long-term growth path requires a rebound, although total numbers in the final forecast year do not differ substantially from past projections.

The South lags the rest of the nation in demand for postsecondary talent in part because of its industry profile.

Industries are defined by the goods and services they produce, not by the diverse occupational and educational characteristics of their employees. For example, everyone who works in manufacturing is part of the manufacturing industry and may serve as a manager, accountant, computer professional, janitor, or frontline technician or operator.¹²

Nonetheless, the industrial base in any region is the keystone in determining wages and education demand. Industry growth drives employment, and the rise and fall of employment in different industries leads to changes in the occupational mix that change the composition of education demand.

The greatest intensity in the demand for high-wage workers with postsecondary education in the nation occurs in a cluster of fast-growing, high-wage services industries. They have workforces dominated—75 percent to 90 percent—by workers with at least some postsecondary education or training. These include:

- Information services,¹³
- Professional and business services,¹⁴
- Financial services,
- Private education services,
- Healthcare services, and
- Government and public education services.

The middle tier of postsecondary concentration and wages includes construction and a set of old-line service industries where the share of workers with higher education hovers around 50 percent. These include:

- Construction,
- Transportation and utilities services,
- Wholesale and retail trade services,
- Leisure and hospitality services, and
- Personal services.

The bottom tier of wages and postsecondary demand are found mostly in the production of goods (manufacturing and natural resources industries), where the share of postsecondary workers ranges between 30 and 40 percent of the workforce.¹⁵

12. We detail the link between occupational growth and education demand later in this report.

13. These industries include publishing industries, such as software publishing, and both traditional publishing and publishing exclusively on the Internet; the motion picture and sound-recording industries; the broadcasting industries, including traditional broadcasting and those broadcasting exclusively over the Internet; the telecommunications industries; web search portals, data processing industries etc.

14. These industries include legal advice and representation; accounting, bookkeeping, and payroll services; architectural, engineering, and specialized design services; office administration, hiring and placing of personnel, document preparation and similar clerical services, solicitation, collection, security and surveillance services, etc.

15. For some states, growth in trade drives growth in local industry. Thus increases in manufacturing or increases in retail can stimulate real estate, rental and leasing.

BRIEF NOTE ON METHODOLOGY

BLS TOTALS SHOW THAT 31% OF JOBS REQUIRE POSTSECONDARY BY 2020, CENSUS DATA ARE TWICE AS HIGH

BLS, Census, CEW: Comparison of education demand

	Prime-age workers			Projections	
	CPS 2010	ACS 2010	BLS 2010	BLS 2020	CEW 2020
Less than high school	10.9%	12.6%	25.9%	25.9%	11.6%
High school diploma or equivalent	28.9	26.7	43.4	42.6	23.6
Some college, no degree + pos-sec vocational cert	17.4	22.2	5.2	5.3	17.9
Associate's degree	10.4	8.6	5.6	5.8	11.8
Bachelor's degree	21.9	19.8	15.5	15.8	24.4
Master's degree	7.9	7.2	1.4	1.5	7.9
Prof	1.4	1.9			1.9
PhD	1.3	1.0	3.1	3.2	1.3
Total	100	100	100	100	100
Postsecondary education and training required	60.2	60.7	30.8	31.6	65.3

We have a four-step approach to forecasting education demand:

Step One: Estimating Long-Term Employment by Industry (the Macro Economy)

Step Two: Estimating Change in the Occupational Structure

Step Three: Forecasting Educational Distributions within Occupations

Step Four: Projecting Education Demand to 2020

Our method differs from the one used by the Bureau of Labor Statistics (BLS). We use time-series information on the changing education requirements of workers within occupations to determine the future demand. The BLS does not analyze education demand, nor make estimates. Instead BLS uses the subjective assessment of analysts to “assign” the most significant entry-level education and training requirements for employment in 753 occupations.

Measuring the most “significant” education and training in an occupation is different from tracking trends in educational attainment at hiring or trends in wage advantages conferred on people with greater educational attainment. The BLS method has the unintended consequence of understating education demand as measured by employer preferences at hiring and measured by the employers’ willingness to pay more for higher levels of educational attainment. While not inaccurate as an indicator of minimum educational requirements, the misuse of the BLS education data as an economic demand indicator leads to very low estimates of education requirements that come with important policy consequences. For example, as demonstrated in the table above, summation of postsecondary education by BLS estimates for the nation results in only 31 percent of US jobs requiring postsecondary education today! This is less than in many third-world countries.

Our estimates have been developed to more accurately reflect the changing education requirements of occupations, as revealed by the increasing demands of employers and the higher wages offered to postsecondary workers.¹⁶ We use the actual distribution of education across occupations to determine employers’ demand. Analysis of wages by education level, holding occupation constant, demonstrates that additional postsecondary education enhances productivity, hence validating this measure of education demand. Today 59 percent of the jobs in the nation require postsecondary education and training (35% BA+). For a more complete discussion of our technical methods, visit our website: cew.georgetown.edu/

16. Our analysis, and that of independent analysts, demonstrate that underlying employment is a better measure of education demand – revealing employer preferences – than focusing on education and training requirements reduced to a single education level for each occupation.

GOVERNMENT, RETAIL TRADE AND HEALTHCARE ARE LARGEST EMPLOYERS, BUT MINING AND HEALTHCARE WILL GROW FAST THROUGH 2020

Table 3: Job Growth by Sector for the Southern States

	2010 (in millions)	2020 (in millions)	Growth rate	Rank (by growth rate 2010)	Percent Distribution (2010)	Rank (by size 2010)	South share by industry nationwide (2010)
Accommodation and Food Services	3.7	4.5	22%	10	7%	4	37%
Administrative and Support and Waste Management and Remediation Services	3.4	4.5	32%	2	7%	5	39%
Agriculture, Forestry, Fishing and Hunting	1.1	1.1	-1%	20	2%	14	38%
Arts, Entertainment, and Recreation	1.0	1.2	23%	8	2%	16	32%
Construction	3.0	3.5	16%	12	6%	8	44%
Educational Services	1.0	1.3	29%	4	2%	15	28%
Finance and Insurance	2.7	3.4	28%	6	5%	10	33%
Government	7.0	8.1	16%	14	14%	1	39%
Health Care and Social Assistance	5.3	6.9	31%	3	10%	3	33%
Information	0.8	0.9	11%	17	2%	17	33%
Management of Companies and Enterprises	0.5	0.6	22%	9	1%	19	30%
Manufacturing	3.3	3.6	8%	19	7%	7	34%
Mining, Quarrying, and Oil and Gas Extraction	0.6	0.8	40%	1	1%	18	58%
Personal services	2.9	3.4	20%	11	6%	9	39%
Professional, Scientific, and Technical Services	3.4	4.4	29%	5	7%	6	35%
Real Estate and Rental and Leasing	2.2	2.7	26%	7	4%	11	36%
Retail Trade	5.3	6.0	13%	16	10%	2	37%
Transportation and Warehousing	1.9	2.2	16%	13	4%	12	38%
Utilities	0.2	0.2	9%	18	0.4%	20	39%
Wholesale Trade	1.8	2.0	15%	15	3%	13	36%
Total	51.1	61.5	20%		100%		37%

The **natural resources** sector employs less than 1 percent of the national workforce. It remains strong, however, in the South, which has more than 41 percent (nearly one million) of the jobs in coal mining and natural gas and petroleum extraction. Due to strong demand for domestic energy, analysts expect mining, quarrying, oil and gas extraction, and especially coal-mining to be the fastest job creators in the South over the coming decade. By 2020 there should be an additional 600,000 to 800,000 jobs in this sector. In contrast, a subset of natural resources (agriculture, forestry, fishing and hunting) is likely to lose jobs through 2020. This trend was observed in the last decade as well because agriculture continues to boost productivity by substituting technology for workers. This industry also has been hurt by depressed agricultural prices caused by the recent recession. Overall, natural resources jobs are projected to decrease by 1 percent.

Government is the South's number-one job provider (out of 20). From 2010 to 2020 this industry's employment is projected to grow by 16 percent, from 7 million to 8.1 million jobs.¹⁷ Many other

17. It represents 14 percent of employment for the southern states in this report.

regions in the country have similar levels of government employment, which will grow at a slower rate over the period. **Retail trade** is the second-largest industry, projected to increase 13 percent between 2010 and 2020 and employing 6 million people in the region by the end of the decade. This industry is also highly cyclical and rises and falls with consumer wealth and access to credit.

Third in size is the **healthcare services** industry. Healthcare is also projected to be the third-fastest growing industry in the region over the next decade, after mining and waste management services. Healthcare services will employ close to 7 million people in 2020, 2nd only to government and retail trade. This industry will continue to grow both in the short and long term, spurred mainly by the nation's aging population and the southern migration by senior citizens. (Five of the top 10 retirement destinations are in the South, with Florida and Texas topping the list).

Agriculture, the smallest industry in the South, however, will continue to decline as productivity increases allowing more output with fewer workers. It is the only industry forecast to lose jobs during the recovery period.

Manufacturing is the seventh-largest employer (out of 20) and provides a disproportionate number of jobs in the South. Although manufacturing employment has declined continuously since its heyday in the late 1970s, manufacturing jobs are projected to increase over the next decade, both nationally and in the South. This reversal is due to recovery from steep losses in 2008 and 2009, some independent net job growth, and baby boom retirements. The age profile of the industry is biased towards extremely experienced baby-boom retirees, who by definition have years of knowledge and skill acquired on the job. Manufacturing is extremely susceptible to shortages of qualified workers to fill positions left open by the pending baby-boom retirement.

Durables, textiles and small appliances dominate the region's manufacturing sector, in contrast to the Midwest, where the automobile industry reigns. The projected growth in manufacturing will be concentrated in industries that are knowledge-based and capital-intensive. Manufacturing opportunities will grow, for the first time in recent decades, but will do so using workers with more postsecondary education and training than before.¹⁸ Even so, partially because of its sheer size, manufacturing will be the South's second-slowest sector in job growth over the next decade.

Construction, the eighth-largest employer in the South (out of 20) with about 3 million jobs in 2010, declined rapidly during the recession. Its fortunes tend to track the ebb and flow of the business cycle. Today infrastructure construction is limited by reduced federal, state and local spending on public works and the painfully slow return of the housing market. However, the eventual start of a rebound in housing will revive the industry somewhat, providing 200,000 net new jobs over the decade.

¹⁸ Manufacturing also suffers from the "blue collar and respectability perception" that prevents many from seeing these jobs as still providing good-paying opportunities – especially for high school workers.

Occupational preparation at the postsecondary level has become more important both nationally and in the South.

Demand for workers with postsecondary qualifications is tied tightly to occupations and the skills they require and more loosely to the industries in which they reside.

The alignment between occupation and educational requirements has grown, and career paths are more defined in occupations and less so in industries. The day when people went from high school to a local industry and worked their way up through a variety of occupations, principally learned on the job, is disappearing. Because of increasing skill requirements at the entry level, preparation must improve. Starting out on the loading dock or in the mail room and learning your way into a skilled professional or managerial position is no longer common. Some occupations are tied tightly to particular industries, healthcare for example, but more and more of them are dispersed broadly across industries.

This concept is critical to understanding the forces that drive education demand and to understanding what shapes the southern job market. The connection between education demand and occupation makes sense for a couple of reasons:

1. Occupations have similar requirements regardless of the industry they are in. Accountants perform comparable tasks whether they are working for a mining company or a hospital—and the training required to do the work is virtually the same.
2. If the tasks of a particular job require a high degree of skill, the demand for workers with postsecondary education or training will be high, regardless of industry.

Industries, on the other hand, are made up of all kinds of occupations, some that demand college degrees and some that do not.

The most intense concentrations of postsecondary workers are in STEM (Science, Technology, Engineering and Mathematics); education; healthcare professional and technical; community services and arts; and managerial and professional office occupations. Those five clusters represent more than 30 percent of total employment and about 45 percent of all jobs for postsecondary workers.

The second tier of postsecondary intensity includes sales and office support and healthcare support. The third tier consists of food and personal services and blue-collar occupations.

We divided occupations into ten major clusters for analysis, ranging from blue-collar occupations to the STEM occupations.

We broke the occupational clusters into three tiers: those where 80 percent or more of the workers have postsecondary education; those where more than half of the workers have such training; and those where postsecondary employees are less than half of the workforce.

Healthcare support is projected to be the fastest-growing occupational cluster for the region (out of 10). This is not surprising as the healthcare industry is growing at breakneck speed. Although healthcare support jobs will grow by 35 percent between 2010 and 2020, this cluster is still small and is second to last in total employment.¹⁹ Healthcare support

19. Social sciences grows fastest, but due to its small size, we limit specific discussion of this cluster.

SALES, BLUE COLLAR AND FOOD SERVICES ARE LARGEST EMPLOYERS BUT HEALTHCARE SUPPORT AND PROFESSIONALS WILL GROW FAST THROUGH 2020

Table 4: Job Growth by Occupation for the Southern States

	2010 (in millions)	2020 (in millions)	Growth rate	Rank (by growth rate 2010)	Percent distribution (2010)	Rank (by size 2010)	South share of jobs by occupation nationwide (2010)
Blue Collar Occupations	10.7	12.3	14%	10	21%	2	37%
Community Services and Arts Occupations	2.0	2.5	23%	8	4%	8	31%
Education Occupations	2.9	3.5	23%	7	6%	5	35%
Food and Personal Services Occupations	8.6	10.7	24%	4	17%	3	36%
Healthcare Professional and Technical Occupations	2.3	3.0	27%	3	5%	6	35%
Healthcare Support Occupations	1.3	1.8	35%	1	3%	9	34%
Management and Professional Office Occupations	7.2	8.9	23%	6	14%	4	35%
STEM Occupations	2.1	2.6	23%	5	4%	7	34%
Sales and Office Support Occupations	13.7	16.1	17%	9	27%	1	36%
Social Science Occupations	0.2	0.3	29%	2	0.4%	10	29%
TOTALS	51.1	61.5	20%		100%		37%

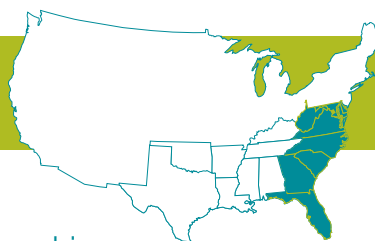
jobs, however, are notorious for not paying family-sustaining wages. Indeed, the sector is dominated by female workers, and career paths to better-paying practitioner jobs are poorly defined.

Healthcare practitioner jobs are the third-fastest-growing occupational cluster. Included are doctors and nurses, as well as technicians, who, with commensurate amounts of experience at their trade, can earn six-figure salaries once overtime is included. Healthcare practitioner positions offer clearer trajectories into the middle class, especially for women.

Sales and office support is the largest employer, largely related to the size of retail trade. This occupational category is very diverse and offers many opportunities for holders of postsecondary education and training to obtain middle-class wages. Blue collar and food and personal services are the second- and third-largest occupational clusters in the region. Combined, they will provide 23 million jobs to Southerners by 2020 - a full 38 percent of all employment. **Blue-collar** jobs, especially in manufacturing, still offer the best-paying opportunities for holders of a high school diploma and to those with postsecondary training. These opportunities are still available mainly to male workers, who can earn family-sustaining wages with a trade in the manufacturing sector. **Food and personal services** are often marked by high turnover, low wages and low educational attainment. It will grow by 24 percent over the decade for the region.

STEM is the fifth-fastest-growing occupational cluster in the South and its seventh-largest employer, projected to employ 2.6 million workers by 2020. Defined as science, technology, engineering and mathematics jobs, their central role in innovation and technological growth makes many policy and business leaders strong proponents of increasing the number of STEM-educated workers. STEM jobs also pay well at every level of the educational distribution, a trend that remains consistent across time, making them a good bet for increasing the tax base of any state.

In the following section we provide state-by-state detail on industry growth, occupational growth and education demand.



Delaware > Polarized economy > Finance-driven

The state's unemployment rate peaked at 9.4 percent in February 2010, and has been slowly declining since. Over the next decade, the number of jobs in the state is projected to increase by 66,500, at an average annual growth rate of 16 percent.²⁰

South Atlantic states are well known for their relatively high per capita GDP and comparatively well-educated populations. For example, Delaware's per capita real GDP in 2010 (\$62,600) was 2nd in the region only to the District of Columbia. Strong in finance and in professional and business services, the state favors highly educated workers, and by 2020, 55 percent of all Delaware jobs will require postsecondary education and training.

Industry in Delaware

By employment, Delaware's largest sectors in 2010 were wholesale and retail trade (15% of total state employment), followed by professional and business services (14%), healthcare services (12%), and financial services (12%).

Due to a number of factors, including the state's agreeable tax climate and investment incentives, the financial services industry is by far the largest contributor to the state's real GDP, accounting for almost half of total output in 2010 (49.3%).²¹ In fact, over 60 percent of all Fortune 500 companies are members of the Delaware business community.²² Bank of America, for example, ranks among Delaware's top private employers. In the mid-2000s, the industry grew rapidly due to a wave of mergers and acquisitions.

The financial collapse of 2007 resulted in the buy-outs, restructuring and closure of many banks nationwide. This damage to the state's leading industry rippled through Delaware's economy and limited access to credit for individuals and businesses. Like the rest of the country, the state could not grow fast enough to sustain existing jobs and replace the ones that were lost between 2007 and 2010.

Since 2010, however, the industry has been recovering, and its contributions to GDP growth have picked up. Even so, Delaware's total GDP has yet to regain its pre-recession levels. Financial services jobs are expected to grow by 10 percent through 2020, which is lower than the state's projected average of 12 percent. The industry's consolidation has increased the demand for workers with dual law and finance backgrounds to sift through new legislation and decipher the implications for companies' bottom lines.²³

Delaware's financial services sector includes real estate, rental and leasing, which is by itself a significant contributor to the state's economy. Traditionally this industry has depended on the

20. Center on Education and the Workforce forecasts of education demand through 2020. Note that industry totals may differ from occupation totals due to methodological differences and rounding.

21. <http://www.areadevelopment.com/stateResources/delaware/Delaware-financial-services.shtml>

22. http://dedo.delaware.gov/pdfs/main_root/annual_report/08DEDOannual-vs9.pdf

23. Mergers and acquisitions created a new organism. As they grow more complex, the old rules no longer apply, and we need new types of workers to sort through them.

success of manufacturing and wholesale and retail trade to drive demand for its own services. Real estate features an above-average contribution (16%) from the subsector focused on leasing consumer and business goods, but the bulk of output comes from the sale and rental of business property. This sector actually grew, albeit modestly, during the recession, unlike related ones such as construction, manufacturing, and personal services, which declined by double digits between 2007 and 2010.

Manufacturing, while a relatively small contributor to the state's GDP (7% in 2010), employs a disproportionately high percentage of workers. Manufacturing in Delaware was hit hard by the recession and has been shrinking ever since. Manufacturing of non-durables suffered a 25 percent decline in 2008, while manufacturing of durables dropped by 16 percent in 2009.

Delaware's healthcare industry is projected to be the most significant source of new jobs through 2020. Save for education, it was the only major sector that did not lose jobs during the recession, with real output growing by 10.8 percent between 2007 and 2010.²⁴ Three of the top ten private employers in Delaware provide healthcare services: Nemours/Alfred I. duPont Hospital for Children, Bayhealth Medical Center, and Christiana Care Health System. Employment is projected to grow 24 percent from 2010 to 2020, largely due to the needs of the baby boomers. However, their retirement is a double-edged sword; while an aging population will lead to healthcare industry growth, it will also limit growth in its labor force. The number of 16- to 65-year-olds in the state is expected to grow by only 5.3 percent between 2008 and 2018, which is less than a third of the 16.8 percent rate between 1998 and 2008.²⁵ This may mean that the healthcare industry will have to scramble to train existing residents for healthcare occupations, or poach workers from neighboring states.

Professional and business services accounted for 14 percent of Delaware's employment in 2010 and is expected to reach 15 percent by 2020.²⁶ It comprised 10 percent of the state's 2010 real GDP and remained remarkably steady during the recession, falling by only 0.1 percent since 2007.

The government and public education sector in Delaware remained stable during the recession. Federal, state, and local government, including the military, comprised 8.7 percent of real state output as of 2010. The University of Delaware, for example, is one of the top ten employers in the state. Dover Air Force Base is another major employer. This industry's output grew by 1.3 percent from 2007 to 2010, while many other industries suffered serious declines. Between 2010 and 2020 employment in education is expected to grow by 14 percent.

Occupations in Delaware

Delaware's occupational composition is a mix of postsecondary-intensive and lower-skill occupations, but its growth rates generally favor postsecondary education. A striking 28.6 percent of Delaware's workers were employed in sales and office support occupations in 2010. This cluster is expected to provide the most job openings both in Delaware and in the nation through 2020, and 66 percent of its workers will need postsecondary education.

24. <http://www.delawareworks.com/oolmi/Information/PDFPview.aspx?FormattedDocumentId=1349>

25. <http://www.delawareworks.com/oolmi/Information/PDFPview.aspx?FormattedDocumentId=1349>

26. According to Inc.com's 5000 companies report, of the seven fastest-growing companies in Delaware, four provide professional and business services through their Delaware headquarters: The Knowland Group, The Archer Group, Appletree Answering Service, and Integrity Staffing.

The state is home to numerous high-tech production businesses, including bioscience and pharmaceutical companies, many of which rank among the top ten employers of Delaware residents (e.g. AstraZeneca, DuPont, and Mountaire Farms, Inc.) Other major firms include Agilent Technologies, Dade Behring, W.L. Gore and Associates, Schering-Plough, and Syngenta.²⁷ In 2010, Delaware was designated one of the nation's top-ten science- and technology-capable states by the Milken Institute of California's State Technology and Science Index.²⁸ STEM occupations, which are closely tied to these industries, already comprise 6 percent of the state's workforce. As a result of its already substantial role in the state economy, STEM will see relatively modest growth of 7 percent through 2020.

Blue-collar occupations, found primarily in manufacturing, are expected to grow by just 8 percent through 2020, due to Delaware's unique industrial makeup and to the long-term impact of the recession. Food and personal services jobs are projected to grow by 16 percent through 2020, compared to 18 percent for managerial and professional office occupations.

By 2020, 55 percent of all jobs in Delaware will require some postsecondary training beyond high school, placing Delaware 12th in the region.

55% OF JOBS IN DELAWARE WILL REQUIRE POSTSECONDARY EDUCATION AND TRAINING IN 2020 (DOWN SLIGHTLY FROM 58% IN 2010)

Table 5: Snapshot of Education Demand for Total Jobs in Delaware (2010 And 2020)

	2010	2020	% in 2020
High school or less	177,300	219,600	45%
Some college	90,000	104,000	21%
Associate's	34,700	35,200	7%
Bachelor's	77,100	84,100	17%
Graduate	47,100	49,500	10%
Total	426,200	492,400	100%

Between 2010 and 2020, the state will have 149,300 job vacancies both from new job opportunities and from vacancies due to retirement. Of these vacancies, 82,700 will favor candidates with postsecondary qualifications, while 66,600 will be for high school graduates and high school dropouts.

Delaware ranks 10th in the South in the proportion of its 2020 jobs requiring a bachelor's degree, 4th in the proportion requiring a graduate degree, and 4th in the proportion suitable for workers who did not finish high school.

27. http://dedo.delaware.gov/pdfs/main_root/annual_report/08DEDOannual-vs9.pdf

28. <http://www.milkeninstitute.org/publications/publications.taf?function=detail&ID=38801259&cat=resrep>

Unemployment in Maryland peaked at 7.7 percent in January 2010 and has been slowly declining since, reaching 7.2 percent in October 2011, but still much higher than its 3.6 percent before the recession.

Maryland's per capita real GDP (\$45,900 in 2010) is above the regional average. Eight of Maryland's top ten employers are in healthcare and wholesale and retail trade services. Four are in healthcare: Adventist Healthcare, Helix Health System, Johns Hopkins Hospital and the University of Maryland Medical System. Another four are in wholesale and retail trade services: Giant Food Stores, Safeway, Target and Wal-Mart. Johns Hopkins University (education services) and Northrop Grumman Corporation (manufacturing) round out the list.²⁹

Industry in Maryland

Showing moderate gains since 2007, real output for the government and public education sector in Maryland has stayed relatively stable, which is not surprising given the state's proximity to the nation's capital. This sector draws almost half of its real output (45%) from the federal civilian government, nearly three times the national average. As a result, this sector was less vulnerable when state and local tax revenues dried up during the recession. But it may suffer more from recent and potential federal budget cuts. As of 2010, 18.9 percent of the state's workers were employed by government and public education, more than by any other sector.

Overall, the state's employment is expected to grow by 15 percent between 2010 and 2020. The professional and business services sector, including scientific and technical services, computer systems, and legal services, remained robust during the economic downturn. In fact, its real output grew by 7 percent between 2007 and 2010, more than twice the pace of the state's economy as a whole. While jobs in this sector declined by 6.9 percent nationwide between 2008 and 2009, the Maryland figure was only 0.3 percent.³⁰ Currently, the professional and business services sector employs the second-largest share of workers (16%) and is followed by wholesale and retail trade services (14%) and healthcare services (12%). These three sectors' real GDP grew slowly but steadily during the recession.

Maryland's real estate, rental and leasing industry, a part of financial services, contributed 17.4 percent to real state output in 2010, helping the economy grow despite the recession.³¹ Between 2007 and 2010 this sector grew by more than 6 percent, even though it is closely tied to the highly cyclical construction industry, which was shrinking by 18.7 percent.

Industries that are less education-intensive did not fare as well during and after the recession. Between 2007 and 2010, real output for transportation and utilities services declined by 9.2 percent, while construction and manufacturing eliminated thousands of jobs, many of which are never coming back.

29. <http://www.msa.md.gov/msa/mdmanual/01glance/html/employ.html>

30. Maryland Annual Report: Workforce Investment Act Title 1-B, 2008

31. Rental and leasing also includes car, office equipment, and other supply rentals.

Maryland has made the expansion of its science and technology-related industries a top budget priority, creating the Biotech Tax Credit ³², Stem Cell Research Fund ³³, and Nano/Biotechnology Initiative Fund.³⁴ Maryland's bioscience industry cluster employs an estimated 30,000 people across 400 private-sector companies. The state also continues to attract foreign direct investment in industries such as bioscience, advanced technology, and aerospace and defense. This year more than a dozen foreign-based companies from Israel, Russia, China and other countries invested in Maryland.³⁵

Among the rapidly growing industry clusters in the state is the cyber-security field. Initiatives to bolster the industry include the formation of public-private partnerships and the creation of centers of research and development at the University of Maryland. The state is home to 163 of Inc.com's fastest-growing companies. One is Ciphent (#16), a firm in Hanover that grew by 1442 percent and created 93 jobs from 2007 to 2010.

Occupations in Maryland

The fastest-growing occupational groups in the state are healthcare (22%), STEM (18%), and community services and arts (17%). Blue-collar jobs are expected to grow the least between 2010 and 2020, at a rate of 9 percent.

66% OF JOBS IN MARYLAND WILL REQUIRE POSTSECONDARY EDUCATION AND TRAINING IN 2020 (UP FROM 65% IN 2010)

Table 6: Snapshot of Education Demand for Total Jobs in Maryland (2010 and 2020)

	2010	2020	% in 2020
High school or less	947,800	1,073,200	34%
Some college	560,700	653,600	21%
Associate's	185,200	279,200	9%
Bachelor's	590,400	624,900	20%
Graduate	433,000	536,400	17%
Total	2,717,100	3,167,300	100%

By 2020, 66 percent of all jobs in the state will require some postsecondary training, one percentage point above the national average.

During the same period, the state will create 960,100 job vacancies both from new jobs and from retirement. There will be 634,700 job vacancies for individuals with post-secondary credentials, in contrast to 325,400 jobs for high school graduates and dropouts.

Maryland ranks 3rd in the South in the proportion of its 2020 jobs requiring a bachelor's degree, 2nd in the proportion requiring a graduate degree, and 16th in jobs for high school dropouts.

32. <http://www.choosemaryland.org/businessresources/pages/biotechnologyinvestmenttaxcredit.aspx>

33. <http://www.msrf.org/>

34. <http://www.gov.state.md.us/pressreleases/080616b.asp>

35. Maryland's Energy Industry Workforce Report, 2009

During the recession, the city maintained a 7.3 percent unemployment rate. By September 2011 it had peaked at 11.2 percent. The District's rate was 5.4 percent before the recession.

The District of Columbia is a unique labor market, with three times as many jobs as there are households.³⁶ But only a third of these jobs are held by D.C. residents; much of the workforce resides in nearby Maryland and Virginia.³⁷

Real GDP in Washington, D.C., in 2010 was \$90.7 billion, near the bottom for the South, but still larger than that of much-larger Delaware, Mississippi, and West Virginia. GDP per capita, however, was \$151,000 in 2010, by far the highest in the southern region, reflecting the large ratio of jobs to residents.³⁸ (The city's per capita personal income, at \$71,000, is a more reasonable measure of the area's economic well-being, though it is still the highest in the South.) During the recession, D.C.'s real GDP continued to grow and averaged 6 percent between 2007 and 2010.

According to the Milken Institute's 2010 Best-Performing Cities Index, the D.C. metro area jumped from 25th in 2009 to 6th place by 2010.³⁹ Furthermore, the city is home to 51 of Inc. com's 500|5000 fastest-growing U.S. companies.

However, the benefits of Washington's strong economy are not evenly distributed; the high per capita GDP covers up a social gulf between the highly educated commuter workforce and residents of certain parts of the city proper. Residents of the District face labor market challenges such as rising education requirements for jobs, low adult-reading proficiency, and one of the highest high school dropout rates in the nation.⁴⁰ In six of the eight District wards, over half of all public school students are eligible for free or reduced-price lunches.⁴¹

Industry in D.C.

While the District's economy is heavily influenced by its role as the nation's capital, it is not driven solely by government employment and spending. A variety of institutions, organizations and private companies also benefit from close proximity to the seat of government. Employment rates in the District are propped up by the area's high concentration of universities, nonprofits, defense contractors, professional associations, consulting firms, computer systems design businesses, and law firms.⁴² Nearly a quarter (21.6%) of the workforce is in the professional and business services industry, which provided 23.4 percent of the District's GDP in 2010.

In 2010 the government and public education services sector contributed 35 percent of the city's real output and 33.7 percent of employment. This sector's 14.3 percent growth between

36. http://www.wdcep.com/wp-content/uploads/2010/11/CEDS_FINAL_2010.pdf Wdce Comprehensive Economic Development Strategy. 09/2010.

37. http://www.wdcep.com/wp-content/uploads/2010/11/CEDS_FINAL_2010.pdf Wdce Comprehensive Economic Development Strategy. 09/2010.

38. Personal income for D.C. was just over \$71,000 in 2010. The GDP per capita figure is skewed and more aptly reflects the overall level of economic activity in the District rather than the income of residents.

39. <http://bestcities.milkeninstitute.org/>

40. http://www.wdcep.com/wp-content/uploads/2010/11/CEDS_FINAL_2010.pdf WDCE Comprehensive Economic Development Strategy. 09/2010.

41. http://www.wdcep.com/wp-content/uploads/2010/11/CEDS_FINAL_2010.pdf WDCE Comprehensive Economic Development Strategy. 09/2010.

42. http://www.forbes.com/2009/01/05/cities-jobs-employment-leadership-careers-cx_tw_0105cities_print.html "Ten Cities for Job Growth in 2009." Tara Weiss. 01/05/09

2007 and 2010 was a major reason for the city's striking 6 percent overall growth. Credit goes mostly to an increase in government expenditures, which are likely to decline, perhaps significantly, as Congress tries to reduce the deficit. If that happens, D.C.'s economy will suffer.

As of 2010, most of the large private employers in the District were in postsecondary education-intensive industries: education and healthcare. Five major universities top the list: American University, the Catholic University of America, The George Washington University, Georgetown University, and Howard University. Major healthcare providers include the Washington Hospital Center, Children's National Medical Center, Georgetown University Hospital, and Providence Hospital. Fannie Mae, in the financial services industry, was the eighth-largest private employer in the District in 2010. However, in 2011, the White House announced plans to wind down the government's close relationship with Fannie Mae, which reduced employment opportunities in finance in D.C.⁴³

Occupations in D.C.

The District of Columbia leads the nation in the percentage of jobs requiring postsecondary education. The leading job categories in 2010 were managerial and professional office, sales and office support, and food and personal services.

The fastest-growing occupational clusters between 2010 and 2020 are predicted to be STEM jobs (20%), education (15%), community services and arts (15%), and healthcare (11%). Sales and office support jobs and the relatively small blue-collar sector are expected to grow the least, at 11 and 10 percent respectively. Social science occupations will grow at a substantial rate, but they make up the smallest category.

76% OF JOBS IN D.C. WILL REQUIRE POSTSECONDARY EDUCATION AND TRAINING IN 2020 (UP FROM 71% IN 2010)

Table 7: Snapshot of Education Demand for Total Jobs in the District of Columbia (2010 and 2020)

	2010	2020	% in 2020
High school or less	187,100	179,200	24%
Some college	87,400	101,500	13%
Associate's	20,800	31,800	4%
Bachelor's	175,200	211,300	28%
Graduate	185,600	238,500	31%
Total	656,100	762,300	100%

By 2020, 76 percent of all jobs in the District of Columbia will call for some postsecondary training.

43. <http://www.bloomberg.com/news/2011-02-11/obama-administration-calls-for-ultimately-winding-down-fannie-freddie.html>

Through 2020, D.C. is projected to create 231,100 job vacancies both from new job openings and from those becoming vacant due to retirement. Of the total number of job openings, 176,700 will be for those with postsecondary credentials, 19,700 for high school graduates and 34,700 for high school dropouts.

The District of Columbia ranks 1st in the South in the proportion of 2020 jobs requiring a bachelor's degree and in the proportion requiring a graduate degree. In contrast, D.C. ranks last in the proportion available to high school dropouts.

Virginia > High education > Tech-based

Virginia's unemployment remained well below the national average, throughout the recession and beyond. The rate has been consistently dropping since peaking at 7.2 percent in late 2009. Virginia's real GDP grew by 3.7 percent between 2007 and 2010, while many neighboring states' economies actually shrank. Furthermore, its 2010 per capita real GDP of \$47,600 put the state 3rd, behind only Delaware and the District of Columbia.

Industry in Virginia

Clearly, Virginia's close ties to the federal government have made it more resistant to recession and stronger in the recovery. In 2010 government and public education services comprised 17.5 percent of the state's real output and 20.9 percent of employment. Between 2007 and 2010, while many sectors lost jobs, government and public education in Virginia grew by 5.2 percent. In most states, at least two-thirds of government contributions come from the state and local level, and these tax revenues dropped precipitously during the recession. In Virginia, however, close to 55 percent comes from the federal civilian and military sectors. Major employers in the Old Dominion include the Department of Defense, the U.S. Postal Service, Fairfax County Public Schools, the County of Fairfax, and the City of Virginia Beach Schools.

Other sectors in Virginia, including professional and business services, also receive significant government outlays. In fact, 30 percent to 40 percent of all professional and business services contracts are with the federal government. This sector provided 19.0 percent of state employment and 18.2 percent of GDP in 2010. While professional and business services was hard-hit in other states, stimulus money and ongoing defense expenditures helped this sector's contribution to state GDP grow by 11.0 percent between 2007 and 2010, a growth rate 2nd only to natural resources. Government contracts are also important to other sectors; they have helped put Northrop Grumman Shipbuilding (manufacturing), and Booz, Allen and Hamilton (professional and business services) among the state's 10 largest employers.⁴⁴ Employment in government is expected to grow by 31.5 percent between 2010 and 2020, a rate exceeded only by healthcare and education services (37.2% and 31.9%, respectively).

44. "Economic Assumptions for the United States and Virginia: Calendar years 2010, 2011, and 2012, Program years 2010 and 2011." Virginia Employment Commission, Economic Information Services Division. http://www.alex.vec.virginia.gov/Imi/pdfs/eabook_2010.pdf

Financial services comprised 20.9 percent of the state's real GDP in 2010, but this highly productive and postsecondary-intensive sector accounted for only 6 percent of employment. The real estate, rental and leasing industry, a financial services sub-sector, is by itself a major contributor to the economy (13% of real GDP in 2010). In good times, it is closely related to the construction and manufacturing sectors, but it behaves very differently when the economy is weak. Construction output dropped by 17.1 percent between 2007 and 2010, but real estate grew by 4.9 percent, about one percentage point faster than the overall state economy.

The healthcare services industry is highly stable during recessions. It made up 8.8 percent of state employment in 2010 and includes one of the ten largest employers: Sentra Healthcare. Wholesale and retail trade services, which generates 10.0 percent of the state's GDP and employs 13.7 percent of Virginians, includes two of its top 10 employers: Wal-Mart and Food Lion.

Occupations in Virginia

Double-digit job growth is expected for all of Virginia's occupational clusters between 2010 and 2020. The growth rates reflect a clear bias toward postsecondary education. While blue-collar jobs are predicted to grow by 12 percent by 2020, healthcare support occupations are expected to grow by 29.3 percent, followed by STEM at 24 percent.

This expected growth in science and technology jobs is possible because of Virginia's strong high-tech infrastructure. According to a 2007 Cyberstates report, close to 9 percent of Virginia's private sector employees were in the technology industry, the highest of any state at the time. Workers were paid 99 percent more than other private sector workers.⁴⁵ Virginia's technology-based economy spans three main sectors: energy, information technology, and advanced manufacturing. The ongoing boom of these sectors is also attributable to state government incentives. Since 2006, Forbes' Best States for Business rated Virginia very high because of strong economic growth, low business costs and favorable quality of life.

68% OF JOBS IN VIRGINIA WILL REQUIRE POSTSECONDARY EDUCATION AND TRAINING IN 2020 (UP FROM 65% IN 2010)

Table 8: Snapshot of Education Demand for Total Jobs In Virginia (2010 And 2020)

	2010	2020	% in 2020
High school or less	1,327,900	1,474,800	32%
Some college	769,600	980,300	21%
Associate's	284,900	391,900	9%
Bachelor's	856,200	1,085,500	24%
Graduate	536,800	651,900	14%
Total	3,775,400	4,584,400	100%

In 2020, 68 percent of all Virginia jobs will require some postsecondary training.

45. Economic Assumptions For the United States and Virginia 2010.

During the same period, the state will add 1.4 million job vacancies both from new job opportunities and from those arising from retirement. Of these vacancies, 942,700 will favor candidates with postsecondary qualifications, while 447,100 will be appropriate for high school graduates and high school dropouts.

Virginia ranks 2nd in the South in the proportion of its 2020 jobs requiring a bachelor's degree, 3rd in jobs that will require a graduate degree, and 15th in jobs that will be available for high school dropouts.

West Virginia > Strong mining > Population loss

West Virginia's unemployment rate remained below the national average throughout the recession, though it climbed slightly in December 2010. Furthermore, the state experienced only a minor decline in real GDP between 2007 and 2008. Between 2009 and 2010 its growth was 4 percent, well above the national average of 2.6 percent. Despite its resilience, the state's per capita real GDP was the second-lowest in the southern states region, at \$30,217 in 2010.

Industry in West Virginia

West Virginia has been historically linked to the natural resources sector, especially to coal production, for which it ranks 10th in the nation.⁴⁶ In 2010, West Virginia coal mines produced in excess of 165 million tons of coal, generating an estimated \$3.5 billion in state revenues, which directly and indirectly accounted for more than 40,000 jobs.⁴⁷ In addition, natural gas production has accelerated. Although natural resources employed only 5.7 percent of the state's workforce in 2010, it contributed 9.5 percent of the state's real GDP. Industrial output grew by a remarkable 29.1 percent between 2007 and 2010, while total state real GDP rose by only 6.9 percent. Manufacturing continues to make significant efficiency gains, so that sector is more a source of economic than employment growth.

The healthcare services sector, which employs 14 percent of West Virginians, is projected to remain an employment leader through 2020. Top employers include West Virginia University Hospitals and the Charleston Area Medical Center. The state is also trying to expand its biotechnology, chemical and pharmaceutical industries using grants, incentives, and state universities to harness growing demand for healthcare products and services.⁴⁸

West Virginia's government and public education services sector comprised 19.1 percent of employment in 2010, and contributed over 17.3 percent of the state's real GDP. Not surprisingly, six of the state's top ten employers fall into this sector: IRS Data Center, Department of Veterans Affairs, the West Virginia Department of Highways, U.S. Postal Service, West Virginia University, and Kanawha County Board of Education.

46. This is if we include petroleum and petrochemicals in natural resources and mining.

47. Labor Market Information by West Virginia 2011

48. <http://wvcommerce.org/business/industries/biotech.aspx>

Other large contributors to the state's real GDP include financial services (14.8%) and wholesale and retail trade services (13.2%). Wholesale and retail trade services employed 15.4 percent of the 2010 labor force, and not surprisingly, includes two of the state's top employers: Wal-Mart and Kroger. Other major employers include leisure and hospitality services (9.8%), professional and business services (8.7%), and manufacturing (7.4%).

West Virginia is home to only eight of Inc.com's 500|5000 fastest-growing companies, as rated in 2010. Most of these companies are in high-growth, postsecondary-intensive industries and represent opportunities in the recovery and beyond. Four growing companies are in the information services industry (HMS Technologies, The McEvoy Administration, Performance Results, and Advanced Technical Solutions), one is in professional and business services (KeyLogic Systems), and one is in financial services (McKinley Carter Wealth Services). The remaining two are in natural resources (Cenergy) and transportation and utilities services (Reliable Environmental Transport).

Occupations in West Virginia

Blue-collar jobs, closely tied to the fate of natural resources and manufacturing industries, are predicted to grow by a mere 5 percent between 2010 and 2020. In contrast, healthcare occupations, STEM occupations and food and personal services jobs are expected to grow by 19 percent, 12 percent, and 12 percent, respectively.

51% OF JOBS IN WEST VIRGINIA WILL REQUIRE POSTSECONDARY EDUCATION AND TRAINING IN 2020 (UP FROM 48% IN 2010)

Table 9: Snapshot of Education Demand for Total Jobs in West Virginia (2010 And 2020)

	2010	2020	% in 2020
High school or less	382,900	397,200	49%
Some college	157,500	189,600	23%
Associate's	56,000	69,700	9%
Bachelor's	91,500	100,700	12%
Graduate	47,700	52,500	6%
Total	735,600	809,700	100%

By 2020, 51 percent of all jobs in West Virginia will require some postsecondary training.

During the same time period, the state will add 245,400 job vacancies both from new job opportunities and from vacancies due to retirement. Of these vacancies, 125,000 will favor candidates with postsecondary qualifications; 120,400, high school graduates and high school dropouts.

West Virginia ranks 17th in the South in the proportion of its 2020 jobs requiring a bachelor's degree, 13th in the proportion requiring a graduate degree, and 13th in jobs for high school dropouts.

Average unemployment for this state during 2010 was 10.6 percent, the third-highest in the region at that time. Unemployment peaked at 10.4 percent in January 2011, well above the national average. The state's real GDP has just managed to surpass its 2007, pre-recession level.

North Carolina is the nation's tenth-largest state, with a population of 9.5 million. Its population is growing at a rate of 9.7 percent, with 47.5 percent of this gain coming from in-migration, and the labor force is growing faster than the nation's.⁴⁹ In-migration and population growth pose an extra challenge for the state, as it must produce jobs not only for currently unemployed residents but also for the more recent arrivals.

Industry in North Carolina

Manufacturing is still a vital sector, comprising 11.6 percent of the 2010 state labor force, while producing 19 percent of the state's real GDP, the highest share of GDP from manufacturing in the South. Technology has made this sector very productive with fewer workers. The state's auto industry ranks 10th in the U.S. in employees, supplying parts, accessories, and components for the automotive, truck, bus, and heavy equipment industries. Manufacturing output as measured by real GDP declined by 12.3 percent between 2007 and 2010, and while it has begun to grow again, it has yet to reach its pre-recession levels. Two manufacturing companies, Smithfield Foods and International Business Machines (IBM), are among the ten largest state employers.

As in Delaware, the largest share of North Carolina's real GDP is derived from the financial services sector (22.2% in 2010), which employs a substantially smaller share of the state's workers (only 5.8% in 2008). It includes two of the largest employers statewide: Wells Fargo Bank and the Branch Banking & Trust Company.

In contrast, government and public education services employs the largest share of North Carolinians (18.2% in 2010) but contributes only the third-largest share of state real GDP (13.7%). Other sectors that employ large shares of state workers as of 2010 include wholesale and retail trade services, with 14.9 percent; professional and business services, with 12.1 percent, and healthcare services, with 10.5 percent.⁵⁰ Four of the ten largest private employers are in wholesale and retail trade services: Wal-Mart, Food Lion, Lowe's Home Centers, and Harris Teeter.

Though North Carolina continues to support traditional industries such as tobacco, furniture manufacturing, and textiles, the state has also positioned itself to grow in knowledge- and innovation-based industries. North Carolina's technology track began in 1959 with the opening of the Research Triangle Park, a 7,000-acre area affiliated with Duke University in Durham, the University of North Carolina in Chapel Hill, and North Carolina State University in Raleigh. The Center is home to 170 global companies involved in research and development.⁵¹

49. 2009 North Carolina Economic Index: Executive Summary. North Carolina Department of Commerce: Policy, Research, and Strategic Planning Division. March, 2009. This info can also be found on <http://www.bls.gov/lau/>

50. 2009 North Carolina Economic Index: Executive Summary. North Carolina Department of Commerce: Policy, Research, and Strategic Planning Division. March, 2009. <http://www.nccommerce.com/en/AboutDOC/PublicationsReports/EconomicDevelopmentReports/MonthlyOverview.htm>

51. <http://www.rtp.org/about-rtp/rtp-companies>

The technological strength of North Carolina has not only helped modernize traditional industries, but also has served as a magnet for newer ones such as nanotechnology and biotechnology. As a result, it is now home to many companies specializing in pharmaceuticals, information technology, telecommunications, and other high-tech domains. North Carolina was recognized by an Ernst & Young survey as the third-leading state in the nation for the number of biotechnology firms.⁵² North Carolina houses some of the leading pharmaceutical companies, namely GlaxoSmithKline, Merck, Novartis, Wyeth Vaccines, and Novo Nordisk.⁵³

Furthermore, the state has a telecommunications, networking, and software development sector with more than 2,000 companies and close to 200,000 highly skilled employees. The companies include Google, Dell, IBM, Sony Ericsson, and Cisco Systems.⁵⁴ North Carolina is home to 113 of Inc.com's fastest-growing companies, many of which work in information technology or healthcare services, or at the intersection of the two.

Occupations in North Carolina

The state's largest employers by occupation are blue collar (26%) and sales and office support (26.1%). However, given their already-substantial size, they will grow the most slowly. Though blue-collar jobs made up over a quarter of total employment in 2010, this occupational cluster is expected to grow by only 1.8 percent in the following ten years, as manufacturing becomes even more efficient or shifts operations offshore. Following national trends, the fastest occupational growth through 2020 will be in healthcare (27%), community services and arts (19%), management (19%) and STEM (19%). These postsecondary-intensive occupations will have a disproportionate role in creating new jobs in North Carolina over the next several years.

61% OF JOBS IN NORTH CAROLINA WILL REQUIRE POSTSECONDARY EDUCATION AND TRAINING IN 2020 (HOLDING STEADY AT 61% FROM 2010)

Table 10: Snapshot of Education Demand for Total Jobs in North Carolina (2010 And 2020)

	2010	2020	% in 2020
High school or less	1,603,300	1,947,700	39%
Some college	967,800	1,175,700	23%
Associate's	396,800	482,100	10%
Bachelor's	814,500	989,400	20%
Graduate	353,900	429,900	9%
Total	4,136,300	5,024,800	100%

In 2020, 61 percent of all North Carolina jobs will require some postsecondary training beyond high school.

During the same period, North Carolina will add 1.5 million job vacancies both from new job opportunities and from vacancies following retirement. Of these vacancies, 932,800 will favor candidates with postsecondary qualifications, while 590,500 will employ high school graduates and high school dropouts.

52. Ernst & Young's 2008 Global Biotechnology Report rankings <http://www.thrivenc.com/whync/comparative-rankings>

53. 2009 North Carolina Economic Index

54. North Carolina Economic Outlook 2009

North Carolina ranks 4th in the South in the proportion of its 2020 jobs requiring a bachelor's degree, 6th in the jobs that will require a graduate degree, and 9th in jobs for high school dropouts.

South Carolina > Polarized opportunity > Government jobs

South Carolina's unemployment rate during the recession hovered at just over 8 percent in 2010, and it peaked at 11.8 percent in November and December of 2009.

Total real GDP declined to \$141.4 billion between 2008 and 2009, and though it climbed to \$145.1 billion in 2010, it has yet to regain its pre-recession level. South Carolina's 2010 per capita real GDP, at \$31,400, was the third-lowest in the South. State economic growth between 2009 and 2010 was on par with the national average. There is some good news for the state: annual exports increased by 23.2 percent in 2010 to \$20.3 billion.⁵⁵

Industry in South Carolina

Contributions to South Carolina's real GDP in 2009 were led by four sectors: financial services (17.1%), government and public education services (16.6%), manufacturing (15.6%) and wholesale and retail trade services (14.6%). The largest employers, however, are government and public education services (19.1%), wholesale and retail trade services (15.3%), manufacturing (11.8%), and professional and business services (11.7%).

The largest employers reflect these sectors' dominant role in the workforce as well as the growing importance of healthcare to the state economy. As of 2010, three of the ten largest employers in the state were part of the healthcare sector, namely Palmetto Health, Greenville Hospital System, and BlueCross BlueShield of South Carolina. Top private employers included BI-LO grocery stores and Wal-Mart. In addition, the School District of Greenville, the University of South Carolina, the U.S. Postal Service, and the Department of Defense employed large shares of workers.

Occupations in South Carolina

Over 70 percent of the jobs held by South Carolinians in 2008 were in the blue collar (27%), sales and office support (27%), and food and personal services (18%) clusters. Mainly because of their large size, these three sectors expect the least employment growth by 2020; blue-collar jobs are likely to grow by only 10 percent. But jobs in healthcare are expected to grow by 22 percent, while STEM positions will grow by 18 percent by 2020.

Among the employers of the state's many blue-collar workers are Michelin's North America manufacturing headquarters and factories, making Michelin one of the state's top-ten employers as of 2010. South Carolina has also attracted several auto industry giants; it is now home to BMW's only assembly plant in North America, a Daimler AG assembly plant, and

55. Global Trade Information Services, Inc., and South Carolina Economic Outlook. South Carolina Department of Commerce. Volume 4, Issue 2. Feb. 2011.

American LaFrance's new corporate headquarters and commercial vehicle manufacturing plant, as well as more than 200 suppliers.⁵⁶

South Carolina is also home to technology-focused companies such as Lockheed Martin, General Electric, Honeywell, and 3D Systems, plus firms in the renewable energy industry like Rollcast Energy. Inc.com, in its 2010 listing of the nation's fastest-growing companies, listed 25 headquartered in South Carolina. M33 Integrated Solutions is one of many growing companies applying new technology to more traditional industrial operations such as transportation.

56% OF JOBS IN SOUTH CAROLINA WILL REQUIRE POSTSECONDARY EDUCATION AND TRAINING IN 2020 (DOWN SLIGHTLY FROM 57% IN 2010)

Table 11: Snapshot of Education Demand for Total Jobs in South Carolina (2010 And 2020)

	2010	2020	% in 2020
High school or less	847,600	1,024,100	44%
Some college	432,600	510,900	22%
Associate's	185,400	218,900	9%
Bachelor's	340,100	401,600	17%
Graduate	156,900	162,100	7%
Total	1,962,600	2,317,600	100%

In 2020, 56 percent of all South Carolina jobs will require some postsecondary training.

During the same period, the state will add 702,600 job vacancies both from new job opportunities and from vacancies arising from retirement. Of these vacancies, 392,100 will favor candidates with postsecondary qualifications; 310,500, high school graduates and high school dropouts.

South Carolina ranks 9th in the South in the proportion of its 2020 jobs requiring a bachelor's degree, 12th in the proportion requiring a graduate degree, and 5th in jobs for high school dropouts.

Georgia Diversified economy > Trade-based Magnet State

Georgia's unemployment rate peaked at 10.4 percent during the winters of 2009 and 2010. Its real GDP, at \$362 billion, shows some improvement from 2009 lows.

Industry in Georgia

Georgia is the nation's ninth-largest state and has the seventh-fastest-growing population in the region.⁵⁷ Furthermore, its economy is well-diversified; in 2010, its real GDP was spread

56. The advanced material sector caters to and supports the auto manufacturing industry, offering research and development at the Clemson International Center for Automotive Research (CU-ICAR). Source: South Carolina Key Performance Indicators 2009
 57. <http://2010.census.gov/2010census/data/>

relatively evenly across sectors, with five producing the largest shares: financial services (18.3%), wholesale and retail trade services (15.2%), government and public education services (13.1%), professional and business services (12.2%), and manufacturing (10.6%). The state's largest employers are split between the public and private sectors. Four of the ten largest state employers are in government and public education services: Cobb County, DeKalb County and Gwinnett County School Systems, and the Department of Defense.

Unfortunately, these sectors have suffered output declines in the post-recession period. In line with other southern states, manufacturing declined by 16.8 percent between 2007 and 2010, while service industries shrank less. There was a 3.1 percent decline in financial services, 1.3 percent in wholesale and retail trade services, 1.1 percent in government and public education services, and 0.9 percent in professional and business services between 2008 and 2009.

Transportation and logistics is also a significant component of Georgia's economy, with logistics service providers such as UPS, Delta and SAIA headquarters.⁵⁸ State commerce has seen large improvement through Georgia's port system, which manages trade on the state's Atlantic coastline and rivers. In October 2010, during the peak season for retail shipments, the system logged record tonnage.^{59, 60}

Georgia is also home to a growing high-tech sector. The state has been ranked among the top 10 Cyberstates.⁶¹ Software and information technology (IT) services and telecommunications account for nearly 65 percent of the state's high-tech jobs. A few innovative companies are leading the way. Twenty-five of Inc.com's 500|5000 fastest-growing companies in the nation are headquartered in Georgia, led by Vendormate.⁶² Correspondingly, STEM occupations are anticipated to grow by 16.5 percent through 2020, roughly matching the expected national growth rate in this field.

Within Georgia's manufacturing sector, the biggest news involved the 2010 opening of Kia Motors Corporation's 1st U.S. factory.⁶³ Private wholesale and retail trade services includes four of the largest employers: Publix Super Markets, Inc., the Home Depot, The Kroger Company, and Wal-Mart. Finally, Delta Airlines, as mentioned earlier, offers many transportation jobs, while the Shaw Industries Group provides many manufacturing jobs.

Occupations in Georgia

Over half of Georgians worked in sales and office support and blue-collar occupations in 2010. Unfortunately, projections for growth in these occupational clusters remain below average. Blue-collar jobs will grow by only 12 percent through 2020, while sales and office support occupations will grow by 18 percent. In contrast, healthcare occupations, which comprise 6.5 percent of the workforce, are expected to grow by 29 percent by 2020, with growth in demand for both high-skill professionals and lower-skilled support workers.

58. http://www.pewtrusts.org/news_room_detail.aspx?id=85899359655

59. Georgia Economic Outlook: December 2010. Wells Fargo Securities, Economics Group, Special Commentary. Dec. 22, 2010.

60. http://www.pewtrusts.org/news_room_detail.aspx?id=85899359655

61. <http://www.techamericafoundation.org/cyberstates2010-georgia>

62. <http://www.inc.com/inc5000/profile/vendormate>

63. The \$1 billion operation employed 1,200 people at opening and was expected to double that number within two years.

58% OF JOBS IN GEORGIA WILL REQUIRE POSTSECONDARY EDUCATION AND TRAINING IN 2020 (DOWN SLIGHTLY FROM 59% IN 2010)

Table 12: Snapshot of Education Demand for Total Jobs in Georgia (2010 And 2020)

	2010	2020	% in 2020
High school or less	1,754,700	2,160,200	42%
Some college	932,700	1,121,200	22%
Associate's	321,500	386,500	8%
Bachelor's	811,700	925,000	18%
Graduate	407,600	490,000	10%
Total	4,228,200	5,082,900	100%

In 2020, 58 percent of all Georgia jobs will require some postsecondary training.

Between 2010 and 2020, the state will add 1.5 million job vacancies, both from new job opportunities and from vacancies arising from retirement. Of these vacancies, 886,100 will favor candidates with postsecondary qualifications; 654,900, high school graduates and high school dropouts.

Georgia ranks 6th in the South in the proportion of its 2020 jobs requiring a bachelor's degree, 5th in the proportion requiring a graduate degree, and 11th in jobs for high school dropouts.

Florida > Housing collapse > Healthcare concerns

The effects of the recession on Florida were perhaps more dramatic than they were for other states in the South, mostly due to the collapse of housing prices. In December 2007, when the national recession officially began, every sector in the state, aside from the public sector, started shedding jobs rapidly. Between December 2007 and March 2010, Florida saw an average of 28,000 jobs disappear every month, or close to a thousand jobs per day.⁶⁴ In 2006, just a year prior, Florida's average unemployment rate was only 3.3 percent. Since 2006, the annual rate has more than tripled, peaking at 12 percent in December 2010. Its 2010 average (11.5%) was the highest in the South.

Real GDP in Florida declined by 5.7 percent between 2007 and 2010, with corresponding declines in almost all sectors.

Despite high unemployment rates, the number of Florida jobs is expected to increase by 1 million between 2010 and 2020 (a rate of 12.2%), the third-fastest rate in the region behind Texas and Virginia. This growth is mirrored by the 2010 Inc.com rankings of the nation's fastest-growing companies, which listed Florida as having the third-largest number of these companies' headquarters (261), behind Texas (405) and Virginia (295). However, Florida's population is expected to grow by 21.4 percent between 2010 and 2020, faster than all

64. Florida International University, Research Institute on Social and Economic Policy. The State of Working Florida 2010. September 2010.

other states in the South. With its high unemployment and with population expected to grow more rapidly than jobs, Florida faces significant challenges in keeping its working-age population employed.

Industry in Florida

During the economic downturn, the construction industry in Florida experienced severe losses in both employment and output. In 2008, this industry employed 6.5 percent of Floridians, but in the next year lost 112,000 jobs.⁶⁵ Since 2007, output declined by a devastating 36.4 percent. Short-term job growth for the construction industry is limited because Florida's housing market remains one of the most overbuilt in the United States.⁶⁶ Likewise, the real estate industry's real output for 2010 was \$5.7 billion below its 2007 levels.

Manufacturing makes up only 5.8 percent of the workforce and an equally small sliver of the state's GDP. Between 2007 and 2010, manufacturing output fell by 11 percent, and average employment fell by 47,000. The decline of manufacturing and construction is especially damaging to workers with a high school diploma or less, as both contain many of the few remaining jobs that pay a living wage to workers without postsecondary education. Job losses in other major sectors during the Great Recession included professional and business services (142,000), retail trade (105,800), and leisure and hospitality (74,000).⁶⁷

As was true nationally, the sectors that best withstood the recession were education and healthcare services, which grew by 2.1 and 6.6 percent, respectively, between 2007 and 2009. While health services are particularly resistant to economic cycles, due mainly to the need-based services they provide, education tends to have an inverse relationship with a declining economy, as residents invest in additional certificates or degrees in the face of a tough job market. Yet Florida's higher education budget was cut by \$289.3 million, which is sure to negatively impact enrollment and completion rates for the state. The healthcare industry in Florida comprised 11.1 percent of the state workforce in 2009. Professional and business services, wholesale and retail trade services, and government and public education services employed the most Floridians in 2008, with 16.3, 16.2 and 13.9 percent, respectively.

As of 2010, the roster of the state's largest employers reflected the importance of education, healthcare, retail, and government to the state economy. HCA Healthcare and two county school districts (Miami-Dade and Broward) held three of the top ten spots. Another three of the largest employers were wholesalers and retailers: Publix Super Markets, Wal-Mart, and Winn-Dixie Stores. The other four were Walt Disney, Marriott Hotels, Hilton Hotels and McDonald's. Through 2020, the economy will continue its transformation into a services-based one; construction, manufacturing and natural resources will lose jobs, while service industries will experience employment growth between 6 percent and 35 percent.

The financial services sector generates almost a quarter of Florida's real GDP. Others that make up a large share include wholesale and retail trade services (15.1%), government and public education services (11.9%), and professional and business services (11.3%).

65. Florida Agency for Workforce Innovation, Labor Market Statistics Center 2010

66. Wells Fargo, Economics Group. Special Commentary. Florida Economic Outlook: Feb. 2011. https://www.wellsfargo.com/com/research/economics/reg_reports.

67. Florida Agency for Workforce Innovation, Labor Market Statistics Center 2010

Like other southern states, Florida has undergone a diversification of its industrial base, mainly by building its information technology industry, which develops tools and technologies for sectors such as defense, transportation, healthcare and entertainment.

Florida is also pursuing growth through innovation by establishing research and development centers within its universities and investing in high-tech industries.⁶⁸ For example, Florida is home to a thriving biomedical industry and ranks 2nd in the nation in medical device registrations with the FDA.

Occupations in Florida

Florida's top three employing occupational clusters in 2010 were sales and office support (31.7%), blue collar (20.3%), and food and personal service occupations (18.6%). These occupations are expected to grow by 17 percent, 10 percent, and 22 percent, respectively, by 2020. Other fast-growing clusters are healthcare (29%), STEM (18%), and managerial occupations (18%). They are characterized by extremely high levels of educational attainment and will place increasing pressure on the state's education system to meet the demand for skilled employees. In 2020, 58 percent of all Florida jobs will require some postsecondary training.

58% OF JOBS IN FLORIDA WILL REQUIRE POSTSECONDARY EDUCATION AND TRAINING IN 2020 (HOLDING STEADY SINCE 2010)

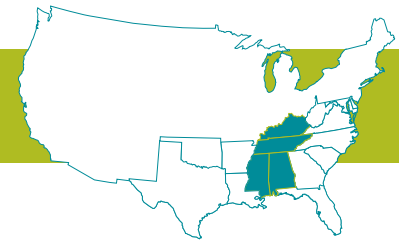
Table 13: Snapshot of Education Demand for Total Jobs in Florida (2010 And 2020)

	2010	2020	% in 2020
High school or less	3,332,600	4,065,000	42%
Some college	1,718,800	2,096,600	22%
Associate's	802,200	978,600	10%
Bachelor's	1,449,300	1,767,800	18%
Graduate	660,900	806,200	8%
Total	7,963,800	9,714,200	100%

Between 2010 and 2020, the state will add 2.9 million job vacancies both from new job opportunities and from vacancies arising from retirement. Of these vacancies, 1.7 million will favor candidates with postsecondary qualifications; 1.23 million will favor high school graduates and high school dropouts.

Florida ranks 7th in the South in the proportion of its 2020 jobs requiring a bachelor's degree, 8th in the jobs that will require a graduate degree, and 8th in jobs for high school dropouts.

68. Florida Economic Outlook 2009



Kentucky > Manufacturing > Low-education

During the early 2000's, Kentucky's unemployment rate was on par with the national rate. But from 2005 to 2007, the rate crept up at a pace that carried it above the national average. Reflecting layoffs in its declining manufacturing sector, as well as the recession, the rate continued to rise until peaking at 11.1 percent in July 2009. The state's GDP, however, suffered only a minor decline in 2009, and by 2010 it equaled, and then exceeded, its pre-recession level.

Industry in Kentucky

Kentucky is highly reliant on manufacturing, and so will be disproportionately hurt by the expected national decline in employment levels as manufacturing productivity improves. In 2010 manufacturing accounted for 12.2 percent of total employment and 16.9 percent of GDP.⁶⁹ Employment in manufacturing declined by 20.1 percent between 1998 and 2008,⁷⁰ and it is expected to further decline by 2.3 percent through 2020. Aside from manufacturing, employment in Kentucky is largely services-oriented: government and public education services (18%), wholesale and retail trades services (15.1%), and healthcare services (10.7%).

Kentucky's top employers are widely distributed among economic sectors. In 2010, the list included three major manufacturers (Toyota Motor Corporation, Ford Motor Company, and Lexmark International) and two transportation and utilities companies (United Parcel Service and Delta Air Lines). Two top employers are financial services companies: Citigroup and FMR LLC. Finally, healthcare, transportation and utilities, and information services are represented by Humana, Inc., General Electric, and Affiliated Computer Services. Kentucky is home to 43 of the nation's fastest-growing companies, as ranked by Inc.com in 2010. CSS Distribution Group tops the list, grossing \$13.8 million and growing at a rate of 3,971 percent over the last three years.

Occupations in Kentucky

By occupation, the blue-collar cluster was the largest in 2010, at 28.3 percent of all employment, followed by sales and office support (25.9%) and food and personal services (15.7%). The next decade will be a period of economic change for Kentucky as those occupations that traditionally employed workers with high school or less education either stagnate or decline. With the close ties that exist between blue-collar occupations and manufacturing, this occupational cluster is expected to have Kentucky's second-lowest rate of job growth (8%) between 2010 and 2020. Managerial and professional office jobs and sales and office support are next, projected to grow by 11 percent through 2020.

69. Kentucky State Plan Modification: Workforce Investment Act and Wagner-Peyser. July 1, 2009-June 30, 2010
70. Kentucky State Plan Modification: Workforce Investment Act and Wagner-Peyser. July 1, 2009-June 30, 2010.

In contrast, healthcare jobs in Kentucky will experience 20.1 percent growth and comprise 9.2 percent of the workforce by 2020. Healthcare's projected growth is followed by education occupations (16.3%), food and personal services (12.1%), and community services and arts (11.2%).

56% OF JOBS IN KENTUCKY WILL REQUIRE POSTSECONDARY EDUCATION AND TRAINING IN 2020 (UP FROM 53% IN 2010)

Table 14: Snapshot of Education Demand for Total Jobs in Kentucky (2010 And 2020)

	2010	2020	% in 2020
High school or less	872,500	935,700	44%
Some college	419,900	524,000	24%
Associate's	151,500	195,000	9%
Bachelor's	276,800	317,200	15%
Graduate	147,600	169,200	8%
Total	1,868,300	2,141,100	100%

By the year 2020, 56 percent of all jobs in the state will require some postsecondary training.

Between 2010 and 2020, Kentucky will create 649,200 job vacancies both from new jobs and from retirement. There will be 365,500 job vacancies for individuals with postsecondary credentials, in contrast to 283,700 for high school graduates and high school dropouts.

Kentucky ranks 14th in the South in the proportion of its 2020 jobs requiring a bachelor's degree, 10th in the proportion requiring a graduate degree, and 14th in jobs for high school dropouts.

Tennessee > Natural resources growth > Transitioning to high-tech

Unemployment in Tennessee averaged above 7.7 percent during the recession. It peaked at 10.8 percent from June to August 2009.

Industry in Tennessee

While Tennessee's experience with the recession and recovery was milder than for many southern states, the ill effects of the recession varied across the state. Employment in the goods-producing industries (i.e. manufacturing) declined much faster than employment in the service-providing sector.

Tennessee's \$228.9 billion real GDP in 2010 was somewhat evenly distributed among five sectors: financial services (17.4%), wholesale and retail trade services (15.5%), manufacturing (15.4%), government and public education services (11.4%), and professional and business services (11.1%). Between 2007 and 2010, real GDP contributions declined for most sectors, with the most notable exceptions of natural resources, which grew by more than half (59.1%), healthcare services and financial services, both with 9 percent growth. As in the rest

of the nation, the largest declines were in construction, manufacturing, transportation and utilities services, food and personal services, and leisure and hospitality services.

The three largest employing sectors in Tennessee in 2010 were wholesale and retail trade services (16.1%), government and public education services (14.5%), and manufacturing (12.2%). These figures reflect the prominence of both service and goods-producing industries in Tennessee. Three of the 12 largest employers are manufacturers: Eastman Chemical Company, General Motors (Spring Hill plant), and Nissan North America. Five top employers work in healthcare services: Baptist Memorial Hospital East, Methodist Hospital, St. Thomas Hospital, T.C. Thompson Children’s Hospital and Vanderbilt Medical Center. The Shelby County Board of Education and the University of Tennessee are two top employers offering public education services. Finally, Med Quist Inc. and Gaylord Opryland Resort provide leisure and hospitality services to state residents and visitors.

Like many southern states, Tennessee is shifting attention to other industries. The common approach in the region is to invest substantially in innovation and new technology to revitalize traditional sectors such as agriculture and manufacturing.⁷¹ Tennessee is home to Physicians’ Pharmaceutical, which has capitalized on the growing demand for healthcare products and was 15th on Inc.com’s 2010 list of the 500|5000 fastest-growing companies. More than 100 other Tennessee companies also made the list.

Occupations in Tennessee

As in many states in the South, the largest employing occupational clusters in 2010 were blue collar (27.8%), sales and office support (26.5%), and food and personal services (15.9%). Healthcare jobs in Tennessee will experience rapid 25 percent growth, followed by community services and arts (16%), and STEM (15.5%). Blue-collar jobs are expected to grow by only 7 percent between 2010 and 2020, while sales and office support jobs will increase by 10 percent.

55% OF JOBS IN TENNESSEE WILL REQUIRE POSTSECONDARY EDUCATION AND TRAINING IN 2020 (UP FROM 54% IN 2010)

Table 15: Snapshot of Education Demand for Total Jobs in Tennessee (2010 And 2020)

	2010	2020	% in 2020
High school or less	1,315,400	1,462,800	45%
Some college	629,300	715,400	22%
Associate’s	212,500	274,300	8%
Bachelor’s	477,100	542,400	17%
Graduate	242,800	276,000	8%
Total	2,877,100	3,270,900	100%

In 2020, 55 percent of all jobs in Tennessee will require postsecondary education and training.

71. According to a study conducted by the Memphis Bioworks Foundation, the strengthening of bioeconomic industries could produce 25,000 jobs in ten years and generate \$8 billion in state revenues. Annual Workforce Report 2010.

Between 2010 and 2020, Tennessee will add 991,600 job vacancies both from new job opportunities and from vacancies following retirement. Of these vacancies, 548,200 will favor candidates with postsecondary qualifications, in contrast to 443,400 for high school graduates and high school dropouts.

Tennessee ranks 12th in the South in the proportion of its 2020 jobs requiring a bachelor's degree, 7th in the proportion requiring a graduate degree, and 12th in jobs for high school dropouts.

Mississippi > Low education > Skilled brain drain

In 2005, regional unemployment spiked due to the devastation of Hurricane Katrina. As a result, Congress passed the Hurricane Katrina Unemployment Relief Act of 2005, which allocated \$85 million to Mississippi's Unemployment Trust Fund. This assistance supplemented unemployment payments, aided workforce training, and funded hotlines and websites that could connect the unemployed with jobs in order to help remedy the 10.1 percent unemployment rate observed in September of 2005.⁷²

Despite these efforts, Katrina left Mississippi poorly prepared for the coming economic troubles; long before the recession hit, Mississippi's unemployment rate was already the highest in the South. During the recession, the rate in Mississippi averaged 7.5 percent. In the post-recession period, Mississippi's 2010 average unemployment rate was 10.4 percent, the fifth-highest in the South after Florida, the Carolinas and Kentucky. Its 2010 per capita GDP, at \$29,300, was the lowest in the region.

Industry in Mississippi

The leading contributor to state output in 2010 was government and public education services (17.5%). This sector employed 21.8 percent of state workers, as of 2010, and is projected to grow by 9.9 percent through 2020. Of the ten largest employers in 2010, four were in government and public education services: the DeSoto County School District, Jackson Public Schools, Mississippi Band of Choctaw Indians, and the State of Mississippi.

The second-leading contributor to the state's real GDP in 2010 was manufacturing, which contributed 17.2 percent with only 12.9 percent of the state's workforce. Real output produced by Mississippi's manufacturing industries decreased by 3.2 percent between 2007 and 2010, but they still contributed more to the state's economy than in any other southern state except North Carolina. Employment growth in manufacturing is projected to be a relatively healthy 9.7 percent through 2020.

Mississippi's manufacturing is dominated by petroleum and coal-related food product, and furniture sectors.⁷³ Three manufacturers rank among the ten largest employers in the state: Northrop Grumman Shipbuilding, Sanderson Farms and Tyson Farms. The Kroger Company and Wal-Mart are the largest employers in wholesale and retail trade services, while the North Mississippi Medical Center is a major employer in the healthcare services industry.

72. <http://msbusiness.com/2005/11/85m-federal-grant-boosts-unemployment-trust-fund/>
73. NAM fact sheets.

Mississippi is also home to eight of Inc.com's top-rated companies, including Security Credit Services, a debt-collection firm that is part of the state's growing financial services industry.

In output, government and public education services and manufacturing are followed by financial services (14.2%) and wholesale and retail trade services (13.9%). From 2007 to 2010, the largest declines in output were in the least postsecondary-intensive industries; construction, food and personal services, and leisure and hospitality services shrank by double digits. To complicate the recovery process, many of Mississippi's traditional industries have been undergoing restructuring, including auto manufacturing, banking, housing and energy production.⁷⁴

Occupations in Mississippi

Blue-collar workers made up 28.2 percent of the workforce in 2010, followed by sales and office support (25.7%), food and personal services (17%), and managerial and professional office (9%). Projected job growth in the state through 2020 favors clusters requiring middle skills or better. The occupational cluster with the fastest job growth (24%) is projected to be healthcare support, followed closely by STEM jobs at 19 percent. Sales and office support jobs will grow at a moderate pace of 15 percent. Finally, managerial and professional office jobs also are slated to increase by 15 percent between 2010 and 2020, while blue-collar jobs and education occupations will grow by 16 and 17 percent, respectively.

51% OF JOBS IN MISSISSIPPI WILL REQUIRE POSTSECONDARY EDUCATION AND TRAINING IN 2020 (DOWN FROM 54% IN 2010)

TABLE 16: Snapshot of Education Demand for Total Jobs In Mississippi (2010 AND 2020)

	2010	2020	% in 2020
High school or less	546,900	692,700	49%
Some college	286,200	368,600	26%
Associate's	122,500	117,200	8%
Bachelor's	162,600	179,100	13%
Graduate	77,400	63,600	4%
Total	1,195,600	1,421,200	100%

By the year 2020, 51 percent of all jobs in the state will require some postsecondary training.

Between 2010 and 2020, the state will create 430,900 job vacancies both from new jobs and from retirements. There will be 220,900 job openings for individuals with postsecondary credentials, in contrast to 210,100 for high school graduates and high school dropouts.

Mississippi ranks 16th in the South in the proportion of its 2020 jobs requiring a bachelor's degree, 17th in the proportion requiring a graduate degree, and 1st in jobs for high school dropouts.

74. Mississippi Economic Review and Outlook 2010; <http://www.mississippi.org/index.php?id=140>

Before the recession, Alabama enjoyed below-average unemployment rates. Though state unemployment remained slightly lower than the national average during the recession, Alabama struggled to recover, posting a peak of 10.4 percent unemployment from September to December 2009.

Industry in Alabama

Two sectors contributed the most to real state GDP as of 2010: government and public education services and manufacturing (both at 16.3%). Government and public education in Alabama employed 18.9 percent of the workforce in 2010 and is expected to grow by 11.9 percent through 2020. The top employers in the sector are the University of Alabama at Birmingham, the Mobile County Public School System, the U.S. Postal Service, and major military bases.

Alabama's manufacturing sector, dominated by metal/natural resources, motor vehicle and paper companies, did not do as well. Its real output declined by 8.1 percent between 2007 and 2010, and the future promises more of the same. In 2010, it employed 13.4 percent of state workers, but by 2020, it will employ 12 percent; the total number of jobs will grow, but not by much compared to overall national or state job growth. This sector currently includes one of the state's top employers: the Pilgrim's.

Other major state employment sectors are wholesale and retail trade services (15.6%), professional and business services (11.4%), and healthcare services (9.1%). Most of the other largest employers in Alabama are in these industries: the University of Alabama at Birmingham Health System, Huntsville Hospital, the Alabama Power Company, Regions Bank, and Wal-Mart.

The recession has heightened the need for economic diversification and innovation to supplement the less-robust traditional sectors. Currently, the state is focusing on aviation, biofuels, alternative energy components, and information technology.⁷⁵ Though STEM jobs in Alabama comprised only 4.4 percent of the workforce in 2008, jobs in this cluster are expected to increase by 17.6 percent by 2020. Projected growth in STEM is supported by the state's growing companies. According to Inc.com, 55 of the nation's fastest-growing companies are headquartered in Alabama, including two companies that provide online information security services: eSolution Architects and Pikewerks.

Alabama's aerospace industry has a long history and is strongest in Huntsville, home to the NASA Marshall Space Flight Center. There are close to 300 companies working in aerospace, defense, aviation, and maintenance, refurbishment and overhaul. The industry also attracts government grants and contracts, boosting state revenue. For instance, in 2008 Alabama received an estimated \$8.5 billion in Department of Defense contracts.⁷⁶

75. State of the Workforce Report IV: Alabama 2009

76. <http://www.amazingalabama.com/key-industry-targets-aerospace.html>

Occupations in Alabama

As with most states in this region, blue collar (28.9%), sales and office support (26.5%), and food and personal services jobs (15.2%) make up the largest occupational clusters. These three are expected to grow by a respective 12 percent, 13 percent, and 19 percent over the decade. Healthcare occupations, which made up 7.9 percent of the workforce in 2010, are expected to increase by 23 percent. The extremely rapid projected growth for STEM and healthcare, compared to the less education-intensive clusters, means that future job opportunities in Alabama will increasingly require postsecondary education.

53% OF JOBS IN ALABAMA WILL REQUIRE POSTSECONDARY EDUCATION AND TRAINING IN 2020 (DOWN FROM 55% IN 2010)

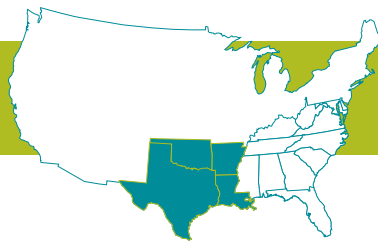
Table 17: Snapshot of Education Demand for Total Jobs in Alabama (2010 And 2020)

	2010	2020	% in 2020
High school or less	913,800	1,126,200	47%
Some college	460,700	543,800	23%
Associate's	170,900	178,000	7%
Bachelor's	314,600	347,600	15%
Graduate	151,200	178,500	8%
Total	2,011,200	2,374,100	100%

By 2020, 53 percent of all jobs in Alabama will require some postsecondary training.

Between 2010 and 2020, the state will add 719,900 job vacancies both from new job opportunities and from vacancies due to retirement. Of these vacancies, 378,400 will favor candidates with postsecondary qualifications, while 341,500 will favor high school graduates and high school dropouts.

Alabama ranks 15th in the South in the proportion of 2020 jobs requiring a bachelor's degree, 11th in the proportion requiring a graduate degree, and 3rd in jobs for high school dropouts.



Oklahoma > Natural resources > Transitioning to high-tech

The state's unemployment rate has stayed below the national average over the past ten years. Post-recession, Oklahoma's unemployment rose to 7.3 percent from December 2009 to March 2010, and has since slowly declined. Per capita real GDP in 2010 was a moderate \$35,600.

Industry in Oklahoma

Oklahoma's natural resource wealth and its unique economy cushioned it during the recession. Oklahoma is the third-largest producer of natural gas in the country and ranks 5th in crude oil production. Not surprisingly, natural resources have been a major contributor to Oklahoma's real GDP, generating 12 percent in 2010, but the industry employed only around 6 percent of the state workforce. The state has recently been boosting revenues by increasing natural gas production.

Other leading sectors by real output in 2010 included government and public education services (17.5%), financial services (14.8%), wholesale and retail trade services (12.2%) and manufacturing (11.4%). The largest employers in 2008 were government and public education services (20.1%), wholesale and retail trade services (13.9%), and professional and business services (11.3%). The fastest employment growth through 2020 is expected for educational services, healthcare services and professional and business services, while manufacturing is expected to grow by less than 1 percent.

The State of Oklahoma is the largest employer, followed (in order) by Wal-Mart, Tinker Air Force Base, U.S. Army Field Artillery Center/Fort Sill, the U.S. Postal Service, Oklahoma State University, the University of Oklahoma, American Airlines and its Maintenance and Engineering Center, Tulsa Public Schools, and the Cherokee Nation of Oklahoma. The 2010 Inc.com 500|5000 list included 34 Oklahoma-based companies, including the financial services company Debt Free Associates.

The state has a number of high-tech and innovative industries to supplement its traditional natural resource base. The state's aerospace industry employs approximately 150,000, or one in ten state workers.⁷⁷ There are an estimated 300 aerospace-related companies in Oklahoma, including American Airlines Maintenance and Engineering Center in Tulsa and the Oklahoma City Air Logistics Center at Tinker Air Force Base.⁷⁸

Furthermore, the state is expanding beyond nonrenewable sources of energy, harnessing the wind that ravaged the state during the Dust Bowl era.⁷⁹ Wind energy is a growing industry with the potential to produce close to 10 percent of the nation's wind-generated electricity by 2030, according to National Renewable Energy Laboratory research. The state also has

77. <http://www.ok.gov/OAC/documents/aerospace-brochure-trifold-lowres.pdf>

78. http://www.okcommerce.gov/Libraries/Documents/Why_Aerospace_Firms_Choose_Oklahoma_1508061964.pdf

79. Engage Oklahoma: Profiles in Economic Development 2011. OK Dept. of Commerce, and The Journal Record.

a sizeable bioscience sector supported by research and development centers such as Samuel Roberts Noble Foundation in Ardmore, Presbyterian Health Foundation Research Park in Oklahoma City, and the Oklahoma Technology and Research Park in Stillwater. Much of the bio-scientific research is focused on plant genomics and transgenetics for crop improvements, autoimmune disease and immunology, cardiology and cardiovascular research, infectious disease microbiology, and vision research and ophthalmic neuroscience.⁸⁰

Occupations in Oklahoma

The largest occupational clusters in Oklahoma vary in their postsecondary education demand. As of 2008 they included sales and office support (26.1%), blue collar (25.1%), food and personal services (15.8%), and managerial and professional office (12.5%). In keeping with regional and national trends, the fastest-growing occupational cluster is healthcare (27%). Food and personal services is also a top-growing occupational cluster, expected to provide 20 percent more jobs by 2020. STEM and managerial and professional occupations will grow by 19 percent. Sales and office support and blue-collar positions, however, are projected to grow by far less, with 15 percent and 16 percent growth, respectively, over the next decade.

57% OF JOBS IN OKLAHOMA WILL REQUIRE POSTSECONDARY EDUCATION AND TRAINING IN 2020 (DOWN FROM 55% IN 2010)

Table 18: Snapshot of Education Demand for Total Jobs in Oklahoma (2010 And 2020)

	2010	2020	% in 2020
High school or less	743,800	872,700	43%
Some college	432,800	507,800	25%
Associate's	141,000	165,400	8%
Bachelor's	284,500	333,800	17%
Graduate	110,000	129,000	6%
Total	1,712,100	2,008,700	100%

By the year 2020, 57 percent of all jobs in the state will require some postsecondary training. Between 2010 and 2020 the state will create 608,900 job vacancies both from new jobs and from retirement. There will be 344,400 job vacancies for individuals with postsecondary credentials, in contrast to 264,500 for high school graduates and high school dropouts.

Oklahoma ranks 11th in the South in the proportion of its 2020 jobs requiring a bachelor's degree, 14th in jobs that will require a graduate degree, and 11th in jobs for high school dropouts.

80. Area Development Online 2009

Unemployment in Texas was slow to rise, remaining below the national average through the recession. The rate peaked in August 2011 at 8.5 percent, still well below the national average. However, this translates into an estimated one million unemployed workers, and thus a considerable loss of potential tax revenue.

Industry in Texas

Texas' economic vitality is quite remarkable given its already large population and workforce; it is both the largest state in the South, home to nearly a quarter of the region's population, and its second-fastest growing state, after Florida. The state also has the second-highest real GDP in the country after California, estimated at \$1.1 trillion in 2010.

In job creation, Texas has outperformed all other states since the recession; between 2009 and 2010, over half of all net new jobs in the country were created in Texas.⁸¹ Its real GDP dipped in 2008 but has been growing ever since. At \$44,000, its per capita real GDP is 5th in the South, behind only the Mid-Atlantic States. Its GDP comes primarily from six sectors: financial services (15.7%), wholesale and retail trade services (13.4%), manufacturing (13.2%), natural resources (11.5%), government and public education services (10.9%), and professional and business services (10.6%).

As of 2010, the four largest employing sectors in Texas were government and public education services (16.2%), wholesale and retail trade services (15.4%), professional and business services (13.0%) and healthcare services (9.9%). The state's rapid employment growth is projected to continue over the next decade, but the growth will not be evenly distributed among sectors. On par with national trends, the fastest growth is expected for education-intensive services sectors, including educational services (40.9% projected growth through 2020), healthcare services (38.5%) and professional and business services (28.1%). In contrast, manufacturing will grow the least, by only 7.8 percent.

As in Oklahoma, 2009 output in Texas was boosted by a surge in revenue from the natural resources sector, which increased production by 20 percent, after a slight decline in 2008. For example, Ambit Energy, one of the fastest-growing companies in the nation, has grown by an astonishing 20,369 percent over the last three years. Texas produces and consumes more energy than any other state, and it ranks 1st in oil and natural gas output and in wind-powered energy capacity⁸²

The state is also trying to evolve beyond its traditional economic mainstays. It has an Emerging Technology Fund (ETF) aimed at encouraging the development of new technologies. The fund supports innovation, research, and job creation in industries like semiconductor manufacturing, biotechnology, nanotechnology, environmental sciences, and advanced energy.⁸³ The developing life-sciences field, which has great potential, is comprised of four primary niches: agriculture, medical devices, pharmaceuticals, and research and testing.⁸⁴

81. <http://www.areadevelopment.com/stateResources/texas/texas-leads-us-economic-recovery6342.shtml>

82. <http://www.eia.doe.gov/state/state-energy-profiles.cfm?sid=TX>

83. <http://www.areadevelopment.com/stateResources/texas/texas-leads-us-economic-recovery6342.shtml>

84. <http://www.areadevelopment.com/stateResources/texas/texas-state-report-october-2009.shtml>;

Occupations in Texas

Several of the most postsecondary-intensive occupational clusters are expected to grow rapidly in Texas through 2020. Healthcare occupations will grow by 25 percent and comprise 7.5 percent of total employment in 2020. Education occupations will grow by 15 percent and reach 6.7 percent of employment, and STEM's 14 percent growth will bring it to 5.5 percent of projected employment. Food and personal services, which already employed 16.8 percent of the workforce in 2010, is expected to grow by 14 percent. The two largest occupational clusters are also expected to grow between 2010 and 2020. Sales and office support, which already employed 27.9 percent of Texans in 2010, should see 10 percent growth between 2010 and 2020, and blue collar, with 23.5 percent of state employment, will grow 17 percent.

59% OF JOBS IN TEXAS WILL REQUIRE POSTSECONDARY EDUCATION AND TRAINING IN 2020 (UP FROM 57% IN 2010)

Table 19: Snapshot of Education Demand for Total Jobs in Texas (2010 And 2020)

	2010	2020	% in 2020
High school or less	4,986,000	5,982,400	41%
Some college	2,715,700	3,416,200	24%
Associate's	774,700	1,119,500	8%
Bachelor's	2,123,000	2,815,600	19%
Graduate	924,800	1,163,400	8%
Total	11,524,200	14,497,100	100%

In 2020, 59 percent of all Texas jobs will require some postsecondary training.

Between 2010 and 2020, Texas is projected to add 4.4 million job vacancies both from new job opportunities and from vacancies due to retirement. Of these vacancies, 2.6 million will favor candidates with postsecondary qualifications; 1.9 million will go to high school graduates and high school dropouts.

Texas ranks 5th in the South in the proportion of its 2020 jobs requiring a bachelor's degree, 9th in the proportion requiring a graduate degree, and 2nd in jobs for high school dropouts.

Arkansas > Natural resources > Growth in high-tech

Arkansas has been relatively sheltered from the nation's tumultuous business cycle in recent years. Though modestly increasing after the recession, Arkansas' unemployment rate has not risen above the national average since early 2008.

By 2010 the state's real GDP had risen above its 2007 pre-recession levels. However, its per-capita real GDP (\$31,500 as of 2010) remains among the lowest in the South.

Industry in Arkansas

The largest shares of Arkansas' workers were in government and public education services (17.4%), wholesale and retail trade services (14.5%), manufacturing (14.0%), and health-care services (11.4%), as of 2008.⁸⁵ Several sectors are expected to experience extremely rapid employment growth through 2020, including educational services (42.8%), professional and business services (27.5%), and healthcare services (27.1%). Unlike many other southern states, Arkansas has no sectors expected to decline in employment, although a few, including natural resources and manufacturing, are expected to grow slowly, around 5 percent over the next several years.

In 2010 the top four contributors to the state's real GDP were wholesale and retail trade services (15.7%), financial services (15.5%), manufacturing (14.1%), and government and public education services (13.8%). Healthcare services contributed 7.7 percent. Several sectors suffered serious declines in output during the recession; construction, manufacturing, transportation and utilities services, and information services declined by between 12 and 18 percent from 2007 to 2010. In contrast, natural resources, professional and business services, and financial services all grew by double digits in spite of the recession.

As in Texas and Oklahoma, natural resources output grew from 2007 to 2010, rising 22.2 percent, mainly due to greater extraction of oil and natural gas. In 2008, crude oil output in Arkansas had a market value of \$413.4 million.⁸⁶

The state's top 16 private employers are mostly in healthcare and manufacturing. In healthcare, the largest employers are Baxter Regional Medical Center, Conway Regional Medical Center, White County Medical Center, and White River Medical Center. Top employers among manufacturers include Cargill, Inc., Domtar Corporation, A.W., Inc., Evergreen Packaging, Paloma Industries, Smithfield Foods, and Superior Industries International. Other major employers represent a variety of sectors: Emerson Electric Company (transportation and utilities services), Fred's, Inc. and Target Corporation (wholesale and retail trade services), Simmons First National Corporation (financial services), Windstream Corporation (information services), and Securitas Security Services (administrative and support services).

However, existing major employers do not necessarily represent Arkansas' emerging economic opportunities. In 2010 Inc.com identified 12 Arkansas-based companies as among the nation's 5000 fastest-growing. The highest-ranked was Rockfish Interactive (#445), which provides high-tech professional and business services. Arkansas is also trying to expand its "green" technology sector, primarily through wind energy. In late 2010 Mitsubishi Power Systems started construction on a \$100 million wind turbine plant, which is projected to create hundreds of jobs.⁸⁷ The University of Arkansas has developed programs to train its workforce in areas such as systems engineering and information sciences, biomedical engineering, cell and molecular biology, and molecular biotechnology.

85. Arkansas Economic Report 2010

86. <http://www.aipro.org/EconomicImpactStudy.pdf>

87. <http://arkansasnews.com/2010/10/07/mitsubishi-breaks-ground-on-fort-smith-plant/>

Occupations in Arkansas

Overall employment in Arkansas is expected to grow by 11.5 percent between 2010 and 2020, the fourth-fastest rate in the South. Not surprisingly given the importance of manufacturing, blue-collar workers make up the largest percentage of the workforce (30.6%), followed by sales and office support (25.3%) and food and personal services (15.1%). Projected growth rates for these three occupation groups through 2020 are 9 percent, 10 percent, and 16 percent, respectively. Jobs in STEM, healthcare and education are expected to expand the fastest, at rates of 16 percent, 21 percent and 21 percent, respectively, to comprise 18.5 percent of the Arkansas workforce by 2020.

51% OF JOBS IN ARKANSAS WILL REQUIRE POSTSECONDARY EDUCATION AND TRAINING IN 2020 (DOWN FROM 52% IN 2010)

Table 20: Snapshot of Education Demand for Total Jobs in Arkansas (2010 And 2020)

	2010	2020	% in 2020
High school or less	596,300	697,400	49%
Some college	294,800	323,500	23%
Associate's	94,500	108,300	8%
Bachelor's	186,800	214,000	15%
Graduate	76,700	87,900	6%
Total	1,249,100	1,431,100	100%

By 2020, 51 percent of all jobs in Arkansas will require some postsecondary training.

Between 2010 and 2020, the state will have 433,900 job vacancies both from new job opportunities and from vacancies due to retirement. Of these vacancies, 222,400 will favor candidates with postsecondary qualifications, in contrast to 211,500 for high school graduates and high school dropouts.

Arkansas ranks 13th in the South in the proportion of its 2020 jobs requiring a bachelor's degree, 11th in the proportion requiring a graduate degree, and 3rd in jobs for high school dropouts.

Louisiana > Lasting Katrina syndrome > Low education

Hurricane Katrina devastated the state of Louisiana's population and geography, as well as its economy; unemployment jumped from 4.9 percent in August 2005 to 11.2 percent the following month. In response, Congress passed the Hurricane Katrina Unemployment Relief Act of 2005, which allocated \$400 million to Louisiana and its neighbors.⁸⁸ Though unemployment rested at 11 percent or above from September to November of 2005, Congressional funding and other relief efforts made an impact, helping reduce the rate to 6

88. <http://thomas.gov/cgi-bin/bdquery/D?d109:1:./temp/~bdEou5:@@D&summ2=m&/home/LegislativeData.php?n=BSS;c=109>

percent in December, then 4.5 percent by January 2006. Louisiana's rate has remained lower than the national rate in recent years, staying almost two points below it during the recession. Despite increasing in the post-recession period to peak at 8.1 percent in March 2011, Louisiana's unemployment rate has declined since then.

Between 2007 and 2010, the state's real GDP actually grew by a remarkable 5.3 percent. Its 2010 per capita GDP was \$43,100. The state's economic growth will be somewhat limited by its relatively low level of education demand of 51 percent (50th in the nation) by 2020, which reflects a lower share of high-wage, high-growth occupations and industries.

Industry in Louisiana

Three sectors led state employment in 2010. Government and public education services employs 18.7 percent of Louisiana workers, followed by wholesale and retail trade services (15%) and healthcare services (11%). It is projected that the fastest-growing sectors by employment through 2020 will be healthcare services (21.1% growth) and construction (16.3%). Construction, in particular, has been strengthened by post-Katrina recovery spending, including Go Zone funds. Manufacturing employs 7.5 percent of the workforce, but that figure is expected to decline to 5.9 percent through 2020.

Louisiana's top five sectors in real GDP contributions in 2010 were manufacturing (16.6%), natural resources (15.8%), financial services (13.6%), wholesale and retail trade services (11.2%), and government and public education services (10.3%). An increase in natural resource extraction made a prominent contribution to real GDP, with the sector's real output growing by 55.4 percent between 2007 and 2010. However, the Deepwater Horizon oil spill and the subsequent regulation of offshore drilling will limit additional growth in this sector. Others that grew rapidly during the recession include financial services (19.2%) and healthcare services (13%). However, manufacturing, personal services, and construction all declined by more than 7 percent.

The state and federal governments accounted for five of Louisiana's top ten employers: Fort Polk/Joint Readiness Training Center, Barksdale Air Force Base, Naval Air Station Joint Reserve Base, Louisiana State University (LSU), and the LSU Health Sciences Board. The other five leading employers are private companies: Wal-Mart, Turner Industries Group, Northrop Grumman, Ochsner Clinic Foundation, and Harrah's Entertainment.

Occupations in Louisiana

Unfortunately, the number of jobs in Louisiana is expected to increase by just 7.7 percent between 2010 and 2020, the second-slowest rate in the South after West Virginia. Louisiana's two largest occupational clusters, blue collar and sales and office support, which comprise over half of the state's workforce, are expected to grow by 11 and 12 percent, respectively. In contrast, healthcare (8.4% of the workforce in 2008) and food and personal services (17.1%) are expected to grow by 25 and 20 percent, respectively.

The state is also rapidly expanding younger industries. According to Tech America's 12th annual Cyberstates report, Louisiana is one of the ten fastest-growing states for high-tech industries, due in part to the expansion of digital media, aerospace, and advanced materials. Hold Cube, which provides tech-based marketing services, is an example of strong growth in this field; it was ranked number 95 in Inc.com's 2010 list of America's fastest-growing companies.

52% OF JOBS IN LOUISIANA WILL REQUIRE POSTSECONDARY EDUCATION AND TRAINING IN 2020 (UP FROM 50% IN 2010)

Table 21: Snapshot of Education Demand for Total Jobs in Louisiana (2010 And 2020)

	2010	2020	% in 2020
High school or less	1,016,600	1,146,600	48%
Some college	449,400	528,100	22%
Associate's	132,400	155,600	6%
Bachelor's	319,100	423,100	18%
Graduate	127,700	150,100	6%
Total	2,045,200	2,403,500	100%

By 2020, 52 percent of all jobs in Louisiana will require some postsecondary training.

Between 2010 and 2020, the state will create 728,700 job vacancies both from new jobs and from retirement. There will be 381,100 job vacancies for individuals with postsecondary credentials, in contrast to 347,600 for high school graduates and high school dropouts.

Louisiana ranks eighth in the South in the proportion of its 2020 jobs requiring a bachelor's degree, 15th in jobs that will require a graduate degree, and 7th in jobs for high school dropouts.

SELECTED REFERENCES

- “2009 North Carolina Economic Index: Executive Summary.” North Carolina Department of Commerce: Policy, Research, and Strategic Planning Division. <http://www.nccommerce.com/en/AboutDOC/PublicationsReports/EconomicDevelopmentReports/MonthlyOverview.htm> (accessed November 10, 2011).
- “2010 2nd Qtr. Job Vacancy Survey - Louisiana Workforce Commission.” LAWorks Homepage - Louisiana Workforce Commission. http://www.laworks.net/LaborMarketInfo/LMI_JVS_20102.asp (accessed November 14, 2011).
- “2010 Best-Performing Cities - 200 Largest Metros.” 2010 Best-Performing Cities - 200 Largest Metros. <http://bestcities.milkeninstitute.org/> (accessed November 10, 2011).
- “2010 Census Data - 2010 Census.” 2010 Census. <http://2010.census.gov/2010census/data/> (accessed November 10, 2011).
- Addy, Samuel. “State of the Workforce Report IV: Alabama.” Alabama Office of Workforce Development. http://www.doleta.gov/Programs/2008ReportsAndPlans/Economic_Analysis_Reports/AL.pdf (accessed November 14, 2011).
- “Alabama Aerospace Industry.” Alabama Economic Development - Alabama Power Economic and Community Development. <http://www.amazingalabama.com/key-industry-targets-aerospace.html> (accessed November 14, 2011).
- “Annual Workforce Report 2009.” Tennessee Department of Labor and Workforce Development. <http://www.tn.gov/labor-wfd/Publications/EmploymentSecurity/AnnualWorkforceReport2009.pdf> (accessed November 14, 2011).
- “Arkansas Labor Market and Economic Report, State and Workforce Investment Areas, 2010.” Department of Workforce Services. www.doleta.gov/Programs/2009ReportsAndPlans/Economic_Analysis_Reports/AR.pdf (accessed November 14, 2011).
- “Arkansas’ Largest Employers - 2010.” Arkansas Economic Development Commission. <http://www.arkansasedc.com/media/118399/arkansas%27%20largest%20employers.pdf> (accessed November 10, 2011).
- Bastian, Lisa A. “Texas: Varied Industries at Center of Cautious Recovery Plan, Area Development Online.” Area Development Online, Corporate, Industrial and Manufacturing Facility Site Selection and Expansion Planning Management. <http://www.areadevelopment.com/stateResources/texas/texas-state-report-october-2009.shtml> (accessed November 14, 2011).
- “BEA: Gross Domestic Product by State.” U.S. Bureau of Economic Analysis (BEA). <http://www.bea.gov/regional/gsp/> (accessed November 10, 2011).
- Biennial Revenue Estimate. 2012-2013 Binnium. January 2011. 82nd Texas Legislature. Texas Comptroller of Public Accounts.

- Black Jr., Lewis S. "Why Corporations Choose Delaware." Delaware Department of State Division of Corporations. http://www.corp.delaware.gov/whycorporations_web.pdf (accessed November 10, 2011).
- Bodane, Meihui. "2009 North Carolina Economic Index." The North Carolina Department of Commerce. http://www.nccommerce.com/Portals/0/Research/EconIndex/20090331_EconIndex.pdf (accessed November 14, 2011).
- Boswell, Derrick, Walter Robinson, and Martha Wettemann. *The Growth of Tennessee's Workforce for the Short and Long Term, 2010 through 2018, With an Update on Tennessee's Green Economy*. Tennessee Department of Labor and Workforce Development. Employment Security Division. Labor Market Information Section. 2010.
- "Business Cycle Dating Committee, National Bureau of Economic Research." The National Bureau of Economic Research. <http://www.nber.org/cycles/sept2010.html> (accessed November 10, 2011).
- Butler, Mark. "Georgia Workforce 2016, Beyond the Horizon." Georgia Department of Labor, *An Analysis of Long-term Employment Projections*. <http://explorer.dol.state.ga.us/mis/Current/gaworkforcecurrent.pdf> (accessed November 14, 2011).
- Clabaugh, Jeff. "Washington job growth third-best in nation - Washington Business Journal." *Business News - The Business Journals*. <http://www.bizjournals.com/washington/stories/2010/09/27/daily51.html> (accessed November 10, 2011).
- Combs, Susan. "Texas in Focus: A Statewide View of Opportunities." Texas Comptroller of Public Accounts. <http://www.window.state.tx.us/specialrpt/tif/96-1286.pdf> (accessed November 14, 2011).
- Comprehensive Annual Financial Report for the State of Texas for the Fiscal Year Ending August 31, 2010. Texas Comptroller of Public Accounts.
- Crawford, Mark. "Texas is Big on Economic Growth - and Has the Numbers to Prove It, Texas Today, Area Development Online." Area Development Online, Corporate, Industrial and Manufacturing Facility Site Selection and Expansion Planning Management. <http://www.areadevelopment.com/stateResources/texas/Texas-manufacturing-economy-jobs-growth22299.shtml?Page=1> (accessed November 14, 2011).
- Crawford, Mark. "Texas Today 2011: The Lone Star State Leads U.S. Economic Recovery, Texas, economic recovery, Texas Enterprise Fund, Area Development Online." Area Development Online, Corporate, Industrial and Manufacturing Facility Site Selection and Expansion Planning Management. <http://www.areadevelopment.com/stateResources/texas/texas-leads-us-economic-recovery6342.shtml> (accessed November 14, 2011).
- "Delaware 2018 - Occupation and Industry Projections." State of Delaware - Department of Labor. <http://www.delawareworks.com/oolmi/Information/PDFPerview.aspx?FormattedDocumentId=1349> (accessed November 10, 2011).
- "Describing the Economic Impact of the Oil and Gas Industry in Arkansas." University of Arkansas, Sam M. Walton College of Business, Center for Business and Economic Research. <http://www.aipro.org/EconomicImpactStudy.pdf> (accessed November 14, 2011).

- Detzel, Dr. Justine. "2009 Economic Report for Kentucky." Department of Labor Employment and Training Administration. http://www.doleta.gov/Programs/2009ReportsAndPlans/Economic_Analysis_Reports/KY.pdf (accessed November 14, 2011).
- DeVol, Ross, Armen Bedroussian, Kevin Klowden, and Candice Flor Hynek. "Milken Institute Publications - Research Reports - Best-Performing Cities 2010: Where America's Jobs Are Created and Sustained." Milken Institute. <http://www.milkeninstitute.org/publications/publications.taf?function=detail&ID=38801250&cat=resrep> (accessed November 14, 2011).
- "DOES: D.C.'s Top 200 Employers." Department of Employment Services. <http://www.does.dc.gov/does/cwp/view,a,1233,q,538359.asp> (accessed November 10, 2011).
- Dueffert, Nicole. "Many States Fail to Measure Performance of Transportation Dollars - The Pew Charitable Trusts." The Pew Charitable Trusts - Non Profit Organization Serving the Public. http://www.pewtrusts.org/news_room_detail.aspx?id=85899359655 (accessed November 14, 2011).
- Earle, Angel, Rebecca Gunnlaughsson, Erica Morgan, and Joe Ward. "South Carolina Key Performance Indicators 2009." South Carolina Department of Commerce. http://www.doleta.gov/Programs/2008ReportsAndPlans/Economic_Analysis_Reports/SC.pdf (accessed November 14, 2011).
- "Economic Assumptions for the United States and Virginia." Virginia Employment Commission. http://www.alex.vec.virginia.gov/lmi/pdfs/eabook_2010.pdf (accessed November 10, 2011).
- "Employment, Unemployment and Hours and Earnings 2010 Annual Averages." Workforce West Virginia. <http://www.workforcewv.org/lmi/ECONSUMM/annavg10.pdf> (accessed November 14, 2011).
- "Engage Oklahoma: Profiles in Economic Development 2011." Oklahoma Department of Commerce and The Journal Record. www.okcommerce.gov/Libraries/Documents/2011-Oklahoma-Engage-Magazine-1_3259.pdf (accessed November 14, 2011).
- "Florida's August Employment Figures Released." Agency for Workforce Innovation. www.floridajobs.org/publications/news_rel/LMS%20Release%2009-17-10.pdf (accessed November 14, 2011).
- Florida International University. Research Institute on Social and Economic Policy. The State of Working Florida 2010. September 2010.
- Francois, Paulette. "Division of Workforce Development and Adult Learning Annual Report, Workforce Investment Act Title I-B Program Year 2009." State of Maryland Department of Labor, Licensing and Regulation. http://www.doleta.gov/performance/results/AnnualReports/PY2009/MD_PY_2009_State_Data_Book.pdf (accessed November 14, 2011).
- Georgia Economic Outlook: December 2010. Wells Fargo Securities, Economics Group, Special Commentary. December 22, 2010.

- “Georgia in Perspective 2009, Statistics, Trends, Facts & Figures for Key Policy Issues.” Governor’s Office of Planning and Budget. http://www.spa.georgia.gov/pdfs/wfp_GAperspective09.pdf (accessed November 14, 2011).
- “Georgia LaborMarket Explorer.” Georgia LaborMarket Explorer. <http://explorer.dol.state.ga.us/mis/top.htm> (accessed November 10, 2011).
- Global Trade Information Services, Inc., and South Carolina Economic Outlook. South Carolina Department of Commerce. 4, no. 2, (Feb. 2011). http://sccommerce.com/sites/default/files/document_directory/Economic_Outlook_-_South_Carolina_V_4_Issue_2_February_2011.pdf
- Hill, Marianne T. “Mississippi Economic Review and Outlook.” Mississippi Institutions of Higher Learning. www.ihl.state.ms.us/urc/downloads/review/outlook_June2010.pdf (accessed November 14, 2011).
- Hussar, William J., and Tabitha M. Bailey. “Projections of Education Statistics to 2019.” National Center for Education Statistics. nces.ed.gov/pubs2011/2011017.pdf (accessed November 10, 2011).
- Itner, Mark, and Yasmine Kamaruddin. “Florida Economic Outlook.” Wachovia Economics Group. https://www.wachovia.com/common_files/Florida_June_2009.pdf (accessed November 14, 2011).
- “KBIIS Introduction & Methodology, The Kentucky Cabinet for Economic Development.” Kentucky Cabinet for Economic Development. <http://www.thinkkentucky.com/KBIIS/KBIISIntro.aspx> (accessed November 10, 2011).
- Kentucky State Plan Modification: Workforce Investment Act and Wagner-Peyser. July 1, 2009- June 30, 2010.
- “LMI Tools.” Virginia Workforce Connection. <http://www.vawc.virginia.gov/gsipub/index.asp?docid=427> (accessed November 10, 2011).
- “Local Area Unemployment Statistics Home Page.” U.S. Bureau of Labor Statistics. <http://www.bls.gov/lau/> (accessed November 10, 2011).
- “Louisiana Workforce Information Review 2008.” Louisiana Workforce Commission. http://www.laworks.net/Downloads/LMI/WorkforceInfoReview_2008.pdf (accessed November 14, 2011).
- “Louisiana Workforce Information Review 2010.” Louisiana Workforce Commission. http://www.laworks.net/Downloads/LMI/WorkforceInfoReview_2010.pdf (accessed November 14, 2011).
- “Major Oklahoma Employers.” OKCommerce. www.okcommerce.gov/Libraries/Documents/Oklahoma_Major_Employers_2907081238.pdf (accessed November 10, 2011).
- “Maryland Department of Labor Development.” Department of Labor, Licensing and Regulation. <http://www.dllr.state.md.us/lmi/emplists/maryland.shtml> (accessed November 10, 2011).

- “Maryland Employment.” Maryland State Archives. <http://www.msa.md.gov/msa/mdmanual/01glance/html/employ.html> (accessed November 10, 2011).
- “Maryland’s Energy Industry Workforce Report, 2009.” MD Workforce. www.mdworkforce.com/pub/pdf/energyworkforce.pdf (accessed November 10, 2011).
- McMahon Jr, John J. “Delaware Works.” State of Delaware - Department of Labor. <http://www.delawareworks.com/oelmi/Information/PDFPerview.aspx?FormattedDocumentId=1349> (accessed November 10, 2011).
- “MDA, Target Industries.” Mississippi Development Authority. <http://www.mississippi.org/index.php?id=140> (accessed November 14, 2011).
- “Mississippi IHL - University Research Center.” Mississippi Institutions of Higher Learning. <http://www.mississippi.edu/urc/> (accessed November 10, 2011).
- “Moody’s Analytics Research Store.” Moody’s Analytics: Economic Analysis, Historical & Forecast Data, Alternative Scenarios, Forecasting and Credit Risk Management. <http://www.economy.com/store/product.asp?pub=1&cat=1> (accessed November 10, 2011).
- “North Carolina is continually recognized as a place where businesses Thrive.” THRIVE in North Carolina. <http://www.thrivenc.com/whync/accolades> (accessed November 10, 2011).
- “North Carolina’s Largest Private Employers.” North Carolina Employment Security Commission. http://www.ncesc1.com/lmi/industry/Manufacturing_and_Non-Manufacturing_Employers.pdf (accessed November 10, 2011).
- “Population Projections - State Interim Population Projections by Age and Sex: 2004 - 2030.” Census Bureau Home Page. <http://www.census.gov/population/www/projections/projectionsagesex.html> (accessed November 10, 2011).
- “Publications.” Milken Institute. www.milkeninstitute.org/publications/publications.taf?function=detail&ID=38801259&cat=resrep (accessed November 10, 2011).
- “QWI Online [NAICS].” LEHD Website. <http://lehd.did.census.gov/led/datatools/qwiapp.html> (accessed November 10, 2011).
- “Review & Outlook: Where the New Jobs Are - WSJ.com.” Business News & Financial News - The Wall Street Journal. <http://online.wsj.com/article/SB10001424052702303467004575574322146119944.html> (accessed November 14, 2011).
- Schantz-Feld, Mali R. “Delaware Grows With Financial Services, Entertainment, and IT Investment, Area Development Online.” Area Development Online, Corporate, Industrial and Manufacturing Facility Site Selection and Expansion Planning Management. <http://www.areadevelopment.com/stateResources/delaware/Delaware-financial-services.shtml> (accessed November 10, 2011).

- Schantz-Feld, Mali R. "Southern Exposure Equals High-Tech Innovation, alternative energy, renewable energy, nanotechnology, Area Development Online." Area Development Online, Corporate, Industrial and Manufacturing Facility Site Selection and Expansion Planning Management. <http://www.areadevelopment.com/specialPub/southerntech09/southern-states-high-tech-overview0009.shtml> (accessed November 14, 2011).
- Silvia, John E., Adam G. York, and Kim Whelan. "Regional Economic Commentary, North Carolina Outlook." Wachovia Economics Group. https://www.cagc.org/news_events/news/wachovia_commentary.pdf (accessed November 14, 2011).
- "South Carolina Workforce Information Grant Annual Performance Report PY 2008." Department of Labor Employment and Training Administration. www.doleta.gov/Programs/2008ReportsAndPlans/Annual_Performance_Reports/SC.pdf (accessed November 14, 2011).
- "Special Commentary. Florida Economic Outlook: Feb. 2011." Wells Fargo, Economics Group. https://www.wellsfargo.com/com/research/economics/reg_reports (accessed November 14, 2011).
- "Texas - U.S. Energy Information Administration (EIA)." U.S. Energy Information Administration (EIA). <http://www.eia.gov/state/state-energy-profiles.cfm?sid=TX> (accessed November 14, 2011).
- "The Source." The Source. <http://www.sourcetn.org/> (accessed November 10, 2011).
- "The Virginia Report." Council on Virginia's Future 2010. future.virginia.gov/docs/VirginiaReport/2010_Virginia_%20Report%28Web%29_compressed.pdf (accessed November 14, 2011).
- "Vendormate - Atlanta, GA - The Inc. 5000." Small Business Ideas and Resources for Entrepreneurs. <http://www.inc.com/inc5000/profile/vendormate> (accessed November 10, 2011).
- Walden, Dr. Michael L., and William Neal Reynolds. "The North Carolina Economic Outlook Summer 2009." Department of Agricultural and Resource Economics, North Carolina State University. <http://www.ag-econ.ncsu.edu/faculty/walden/publications/outlooknc/ncoutlooksummer09.pdf> (accessed November 14, 2011).
- "Washington, D.C. Comprehensive Economic Development Strategy." WDCEP. www.wdcep.com/wp-content/uploads/2010/11/CEDS_FINAL_2010.pdf (accessed November 10, 2011).
- Weiss, Tara. "Forbes.com - Magazine Article." Information for the World's Business Leaders - Forbes.com. http://www.forbes.com/2009/01/05/cities-jobs-employment-leadership-careers-cx_tw_0105cities_print.html (accessed November 10, 2011).
- "West Virginia Economic Summary: A Review of Economic Activity in January 2011." WorkForce West Virginia, Research, Information and Analysis Division. <http://www.wvlmi.com> (accessed November 10, 2011).

APPENDICES

APPENDIX 1: SELECTED STATE INDICATORS (DETAIL)

STATE	GDP 2009 (millions)	GDP 2010 (millions)	Percentage Change in GDP by State (2009- 2010)	Per Capita Real GDP (2010)	Per Capita Personal Income by State (2010)	Manufacturing as a Percentage of Real GDP (2010)	Manufacturing as a Percentage of Jobs (2008)*	Unemployment Rate (2010 average)	Change in Average Unemployment rate 2009-2010	Manufacturing Contribution to Real GDP 2010 (millions)
Alabama	\$151,044	\$154,124	2.04%	\$32,200	\$33,945	16%	13%	9.5	-0.2	\$25,074
Arkansas	89,742	91,828	2.32	31,500	33,150	14	14	7.9	0.5	12,881
Delaware	55,472	56,199	1.31	62,600	39,962	6	7	8.5	0.5	3642
District of Columbia	87,614	90,716	3.54	150,800	71,044	0	0	9.9	0.3	197
Florida	664,084	673,375	1.40	35,800	39,272	5	4	11.5	1.3	36,102
Georgia	357,160	361,993	1.35	37,400	35,490	11	9	10.2	0.5	38,452
Kentucky	140,071	144,612	3.24	33,300	33,348	16.9	12.2	10.5	-0.2	24,480
Louisiana	190,138	195,171	2.65	43,100	38,446	17	8	7.5	0.9	32,603
Maryland	257,382	264,882	2.91	45,900	49,025	6	5	7.5	0.4	16,695
Mississippi	86,096	87,075	1.14	29,300	31,186	17	13	10.4	0.8	14,964
North Carolina	368,033	380,631	3.42	39,900	35,638	19	12	10.6	-0.2	72,338
Oklahoma	132,078	133,464	1.05	35,600	36,421	11	9	7.1	0.5	15,119
South Carolina	141,433	145,134	2.62	31,400	33,163	16	12	11.2	-0.1	22,672
Tennessee	220,936	228,716	3.52	36,000	35,307	15	12	9.7	-0.7	35,313
Texas	1,076,412	1,106,236	2.77	44,000	39,493	13	8	8.2	0.6	14,5591
Virginia	370,872	380,609	2.63	47,600	44,762	9	7	6.9	0.1	32,406
West Virginia	53,842	\$55,992	3.99	nd	32,641	10	7	9.1	1.4	5,606
NATIONAL AVERAGE	12,773,853	13,099,722	2.55	42,400	40,584	12	910%	9.6	0.3	\$1,554,402

APPENDIX 2: REAL GDP BY INDUSTRY FOR SOUTHERN STATES (2010)

	AL	AR	DE	D.C.	FL	GA	KY	LA	MD	MS	NC	OK	SC	TN	TX	VA	WV	Total
Natural Resources	\$4,660	\$5,070	(D)	(L)	\$6,161	\$3,825	\$4,742	\$25,553	\$818	\$3,061	\$4,046	\$29,553	\$1,226	\$1,583	\$119,095	\$2,982	\$4,810	\$217,185
Construction	5,809	3,264	\$1,428	811	30,601	12,751	4,867	8,975	10,942	3,799	12,082	4,086	5,846	6,258	43,817	12,797	2,133	170,266
Manufacturing	24,619	12,902	3,679	203	34,921	36,179	22,456	37,696	14,375	15,339	65,016	15,985	20,741	31,442	137,194	27,505	4,803	505,055
Wholesale and Retail Trade Services	21,219	13,786	4,356	1,900	97,251	52,708	19,232	21,905	28,461	11,538	41,984	15,988	19,991	33,418	139,833	36,532	7,123	567,225
Transportation and Utilities Services	7,930	5,765	1,331	1,236	31,340	18,821	8,419	11,441	9,317	4,828	11,951	7,215	6,552	11,367	56,665	12,880	3,106	210,164
Information Services	4,117	4,267	1,184	5,657	32,423	27,353	4,400	4,461	10,981	2,104	13,068	4,550	4,462	8,447	49,743	20,343	1,479	199,039
Financial Services	24,791	14,051	25,997	11,813	164,211	67,812	21,435	24,277	60,173	12,453	79,633	19,616	25,361	40,405	167,664	79,174	8,299	847,165
Professional and Business Services	14,437	7,869	5,530	20,633	76,405	42,635	11,682	14,833	38,463	5,699	35,944	10,438	13,296	24,242	112,998	66,638	3,791	505,533
Private Education Services	737	410	277	2,222	5,390	3,307	784	1,156	3,185	507	3,100	621	846	1,871	5,572	2,931	241	33,157
Healthcare Services	11,047	7,041	3,314	3,959	51,821	23,127	11,705	11,659	19,820	6,175	24,540	8,796	9,033	21,219	61,766	21,080	5,234	301,336
Leisure and Hospitality Services	3,939	2,415	1,216	3,145	34,767	11,441	4,332	6,511	8,003	3,553	10,267	3,769	5,623	8,790	31,533	9,762	1,894	150,960
Personal Services	4,022	2,049	822	5,646	16,496	7,397	2,942	3,661	6,170	1,969	7,186	2,718	3,554	5,967	20,813	9,092	1,226	101,730
Government and Public Education Services	25,200	12,637	4,910	30,569	80,941	49,579	21,790	20,865	45,672	15,260	51,733	22,668	24,436	24,386	119,628	65,934	10,631	626,839
Total	152,514	91,796	54,212	87,765	660,942	356,332	138,694	192,057	256,002	86,271	360,573	147,045	140,693	219,288	1,066,437	367,399	54,819	

Source: Bureau of Economic Analysis, Regional Economic Accounts. NAICS-Based Real GDP by State Statistics.

APPENDIX 3: EDUCATION DISTRIBUTION BY INDUSTRY BY STATE, 2020

Alabama							
Industry	Less than High School	High School/ GED	Some College	Associate's Degree	Bachelor's Degree	Graduate Degree	Total
Construction	114,612	111,410	51,310	9,901	9,909	2,459	299,600
Educational Services	3,136	21,582	23,269	9,306	48,959	23,449	129,700
Financial Services	10,532	27,159	32,606	2,864	18,647	4,292	96,100
Healthcare Services	37,872	73,812	84,570	22,960	35,435	9,951	264,600
Information Services	2,229	5,563	17,662	2,446	8,268	433	36,600
Leisure and Hospitality Services	96,047	81,158	71,143	18,501	12,452	6,799	286,100
Manufacturing	84,323	172,784	71,920	11,487	11,689	6,598	358,800
Personal Services	27,263	52,818	27,422	8,751	10,092	2,653	129,000
Natural Resources	15,908	12,553	4,040	1,594	1,205	-	35,300
Professional and Business Services	43,802	53,572	65,512	18,321	36,275	7,917	225,400
Government Services	6,408	10,178	17,531	3,222	10,755	6,005	54,100
Transportation and Utilities Services	28,202	39,283	21,389	2,494	6,221	310	97,900
Wholesale and Retail Services	82,654	107,986	109,428	28,664	25,167	6,901	360,800
Total	552,988	769,858	597,802	140,511	235,074	77,767	2,374,000

Arkansas							
Industry	Less than High School	High School/ GED	Some College	Associate's Degree	Bachelor's Degree	Graduate Degree	Total
Construction	38,618	81,629	26,074	8,509	7,670	-	162,500
Educational Services	4,371	19,905	14,874	8,146	30,955	7,249	85,500
Financial Services	2,998	12,938	12,400	2,900	3,454	709	35,400
Healthcare Services	17,039	51,354	51,810	22,735	17,023	839	160,800
Information Services	2,007	1,634	5,892	1,829	1,438	-	12,800
Leisure and Hospitality Services	29,098	66,134	38,357	5,583	5,673	1,255	146,100
Manufacturing	63,417	92,187	51,167	10,555	15,005	269	232,600
Personal Services	21,976	24,616	11,929	5,891	12,117	1,271	77,800
Natural Resources	14,805	13,786	5,006	1,557	2,845	-	38,000
Professional and Business Services	20,556	71,143	34,920	9,989	7,267	7,626	151,500
Government Services	1,515	14,423	15,979	8,519	6,369	4,096	50,900
Transportation and Utilities Services	6,216	30,801	15,942	1,010	464	367	54,800
Wholesale and Retail Services	49,129	80,429	62,559	9,648	19,948	587	222,300
Total	271,745	560,979	346,909	96,871	130,228	24,268	1,431,000

APPENDIX 3: EDUCATION DISTRIBUTION BY INDUSTRY BY STATE, 2020

Delaware							
Industry	Less than High School	High School/ GED	Some College	Associate's Degree	Bachelor's Degree	Graduate Degree	Total
Construction	16,825	19,809	4,050	1,029	1,888	198	43,800
Educational Services	3,022	1,114	6,564	4,118	3,306	5,676	23,800
Financial Services	953	10,743	15,770	2,848	9,517	170	40,000
Healthcare Services	1,444	18,133	15,650	10,072	4,002	5,899	55,200
Information Services	-	-	2,312	2,932	1,457	-	6,700
Leisure and Hospitality Services	18,507	19,932	8,937	4,370	3,454	500	55,700
Manufacturing	11,716	22,121	19,301	5,981	5,339	3,641	68,100
Personal Services	3,574	13,854	5,527	151	-	1,094	24,200
Natural Resources	2,130	910	2,618	1,042	-	-	6,700
Professional and Business Services	12,974	17,170	13,163	2,244	14,351	5,799	65,700
Government Services	-	1,429	7,427	207	1,974	2,162	13,200
Transportation and Utilities Services	5,027	6,184	4,189	-	-	-	15,400
Wholesale and Retail Services	11,508	25,968	18,799	6,697	9,329	1,500	73,800
Total	87,680	157,367	124,307	41,691	54,617	26,639	492,300

D.C.							
Industry	Less than High School	High School/ GED	Some College	Associate's Degree	Bachelor's Degree	Graduate Degree	Total
Construction	7,537	23,708	10,705	-	2,750	-	44,700
Educational Services	6,701	8,807	14,151	-	21,183	34,358	85,200
Financial Services	-	11,623	9,270	-	9,026	3,381	33,300
Healthcare Services	5,917	30,701	8,580	7,136	15,664	7,501	75,500
Information Services	1,497	853	1,549	-	6,091	9,711	19,700
Leisure and Hospitality Services	27,640	29,032	4,995	2,385	14,064	1,984	80,100
Manufacturing	3,905	13,091	4,462	-	-	1,342	22,800
Personal Services	8,017	19,948	13,670	2,400	14,835	11,930	70,800
Professional and Business Services	11,188	29,510	33,390	-	38,697	30,015	142,800
Government Services	10,221	3,482	13,181	3,709	28,016	7,191	65,800
Transportation and Utilities Services	13,650	20,205	10,120	1,026	-	-	45,000
Wholesale and Retail Services	6,198	38,548	10,481	-	16,123	5,450	76,800
Total	102,471	229,508	134,554	16,656	166,449	112,863	762,500

APPENDIX 3: EDUCATION DISTRIBUTION BY INDUSTRY BY STATE, 2020

Florida							
Industry	Less than High School	High School/ GED	Some College	Associate's Degree	Bachelor's Degree	Graduate Degree	Total
Construction	452,694	559,597	202,740	62,410	84,041	19,518	1,381,000
Educational Services	9,740	63,170	97,648	40,056	174,215	94,271	479,100
Financial Services	35,249	179,069	193,617	73,402	139,243	29,719	650,300
Healthcare Services	84,553	269,721	257,277	148,917	140,658	58,273	959,400
Information Services	18,504	31,750	50,935	28,485	37,553	12,374	179,600
Leisure and Hospitality Services	273,580	492,240	279,630	96,467	101,020	27,864	1,270,800
Manufacturing	120,568	228,539	121,576	54,370	74,240	19,807	619,100
Personal Services	115,271	178,396	126,986	39,861	54,722	11,564	526,800
Natural Resources	76,906	28,146	22,152	3,641	7,330	3,025	141,200
Professional and Business Services	217,789	329,741	308,839	108,815	212,660	100,756	1,278,600
Government Services	13,013	57,886	78,766	34,637	42,384	23,113	249,800
Transportation and Utilities Services	65,979	150,085	90,845	27,843	34,318	7,931	377,000
Wholesale and Retail Services	269,135	574,473	400,745	158,451	164,197	34,499	1,601,500
Total	1,752,981	3,142,813	2,231,756	877,355	1,266,581	442,714	9,714,200

Georgia							
Industry	Less than High School	High School/ GED	Some College	Associate's Degree	Bachelor's Degree	Graduate Degree	Total
Construction	295,368	316,781	153,255	23,035	46,611	2,950	838,000
Educational Services	21,715	73,636	60,824	34,316	165,903	78,005	434,400
Financial Services	21,015	59,453	73,396	19,387	64,561	13,487	251,300
Healthcare Services	41,888	101,627	146,918	36,116	69,960	27,191	423,700
Information Services	2,446	12,182	19,325	10,131	17,653	5,563	67,300
Leisure and Hospitality Services	192,320	285,907	167,444	32,730	72,388	10,511	761,300
Manufacturing	41,795	66,851	39,164	10,895	11,391	3,103	173,200
Personal Services	41,652	66,663	40,117	10,924	20,028	7,215	186,600
Natural Resources	47,327	39,445	21,731	2,377	4,121	-	115,000
Professional and Business Services	118,388	193,924	149,362	57,220	136,921	46,384	702,200
Government Services	17,702	59,250	81,803	41,519	48,010	27,316	275,600
Transportation and Utilities Services	32,292	99,281	74,954	9,218	11,451	4,904	232,100
Wholesale and Retail Services	102,219	209,422	170,305	43,653	76,691	20,010	622,300
Total	976,127	1,584,422	1,198,598	331,521	745,689	246,639	5,083,000

APPENDIX 3: EDUCATION DISTRIBUTION BY INDUSTRY BY STATE, 2020

Kentucky							
Industry	Less than High School	High School/ GED	Some College	Associate's Degree	Bachelor's Degree	Graduate Degree	Total
Construction	58,639	101,713	44,328	9,625	7,166	729	222,200
Educational Services	8,689	19,402	24,051	9,109	31,305	36,045	128,600
Financial Services	4,231	18,709	18,611	5,071	15,207	1,870	63,700
Healthcare Services	21,188	67,261	77,179	39,651	31,960	12,460	249,700
Information Services	4,066	4,697	8,069	2,208	7,221	1,339	27,600
Leisure and Hospitality Services	78,456	102,603	78,316	9,863	16,805	3,657	289,700
Manufacturing	61,063	144,119	94,249	11,795	9,407	4,567	325,200
Personal Services	24,869	33,908	19,501	4,793	4,569	561	88,200
Natural Resources	19,017	33,966	7,093	4,362	861	-	65,300
Professional and Business Services	27,864	94,679	57,781	18,859	25,070	8,747	233,000
Government Services	7,231	22,575	19,920	2,564	4,057	4,253	60,600
Transportation and Utilities Services	14,786	25,717	24,561	4,120	4,912	2,404	76,500
Wholesale and Retail Services	52,184	128,762	89,464	23,903	11,416	5,071	310,800
Total	382,283	798,111	563,123	145,923	169,956	81,703	2,141,100

Louisiana							
Industry	Less than High School	High School/ GED	Some College	Associate's Degree	Bachelor's Degree	Graduate Degree	Total
Construction	135,836	121,699	52,099	13,119	7,973	673	331,400
Educational Services	11,196	28,742	26,177	7,326	38,920	23,939	136,300
Financial Services	8,604	14,945	25,164	8,377	16,123	1,388	74,600
Healthcare Services	49,022	111,275	73,768	19,052	38,398	14,585	306,100
Information Services	395	5,974	4,923	-	5,100	2,008	18,400
Leisure and Hospitality Services	113,147	95,693	86,499	13,114	17,623	4,425	330,500
Manufacturing	39,024	78,207	32,546	9,657	7,571	2,995	170,000
Personal Services	34,099	55,638	21,168	7,059	7,261	1,775	127,000
Natural Resources	40,555	46,986	9,441	454	3,279	1,286	102,000
Professional and Business Services	38,611	84,868	53,256	19,432	43,927	8,807	248,900
Government Services	3,675	19,554	12,043	7,998	16,610	1,219	61,100
Transportation and Utilities Services	16,108	45,003	28,432	2,835	2,423	-	94,800
Wholesale and Retail Services	92,083	150,948	109,680	19,280	20,028	10,481	402,500
Total	582,355	859,532	535,196	127,703	225,236	73,581	2,403,600

APPENDIX 3: EDUCATION DISTRIBUTION BY INDUSTRY BY STATE, 2020

Maryland							
Industry	Less than High School	High School/ GED	Some College	Associate's Degree	Bachelor's Degree	Graduate Degree	Total
Construction	108,579	171,390	47,002	3,721	15,458	2,350	348,500
Educational Services	14,999	38,620	42,702	15,754	100,446	68,778	281,300
Financial Services	8,272	36,406	40,989	14,109	34,056	16,768	150,600
Healthcare Services	37,888	90,033	75,458	30,351	41,109	43,161	318,000
Information Services	2,107	7,280	12,622	1,235	16,592	5,864	45,700
Leisure and Hospitality Services	86,922	107,826	71,420	30,792	27,836	7,103	331,900
Manufacturing	43,358	88,035	32,282	12,182	25,075	7,568	208,500
Personal Services	25,790	66,708	33,912	7,069	18,785	12,236	164,500
Natural Resources	2,831	5,725	-	-	7,044	-	15,600
Professional and Business Services	72,063	143,860	134,844	31,013	114,069	62,951	558,800
Government Services	7,781	31,879	27,350	4,518	32,697	12,075	116,300
Transportation and Utilities Services	26,676	41,586	29,811	9,544	7,907	2,476	118,000
Wholesale and Retail Services	105,489	185,366	131,951	18,202	48,970	19,722	509,700
Total	542,755	1,014,714	680,343	178,490	490,044	261,052	3,167,400

Mississippi							
Industry	Less than High School	High School/ GED	Some College	Associate's Degree	Bachelor's Degree	Graduate Degree	Total
Construction	58,368	68,992	24,978	1,534	4,811	817	159,500
Educational Services	5,919	12,979	11,954	5,912	32,179	17,157	86,100
Financial Services	5,854	17,816	16,753	2,211	7,063	1,802	51,500
Healthcare Services	16,303	36,644	46,310	25,575	20,203	5,465	150,500
Information Services	4,837	4,150	6,190	-	3,423	-	18,600
Leisure and Hospitality Services	60,119	59,456	31,652	13,108	12,136	2,329	178,800
Manufacturing	73,813	96,912	40,240	10,151	2,651	933	224,700
Personal Services	10,846	29,831	19,602	2,559	11,478	3,284	77,600
Natural Resources	16,578	12,402	5,400	408	2,611	-	37,400
Professional and Business Services	33,132	35,390	26,364	10,376	10,091	848	116,200
Government Services	3,499	8,802	21,597	6,012	3,707	2,482	46,100
Transportation and Utilities Services	10,244	21,767	14,429	3,592	3,075	593	53,700
Wholesale and Retail Services	39,036	84,755	66,612	14,035	15,044	917	220,400
Total	338,548	489,896	332,081	95,473	128,472	36,627	1,421,100

APPENDIX 3: EDUCATION DISTRIBUTION BY INDUSTRY BY STATE, 2020

North Carolina							
Industry	Less than High School	High School/ GED	Some College	Associate's Degree	Bachelor's Degree	Graduate Degree	Total
Construction	180,959	256,495	124,019	15,517	18,832	1,979	597,800
Educational Services	7,342	39,863	44,263	22,926	100,070	59,436	273,900
Financial Services	12,064	51,879	78,024	19,460	59,000	15,273	235,700
Healthcare Services	44,749	102,388	216,961	79,260	93,059	29,683	566,100
Information Services	3,811	11,669	30,669	9,256	23,628	3,467	82,500
Leisure and Hospitality Services	152,331	183,714	139,436	38,281	49,680	9,458	572,900
Manufacturing	174,601	271,696	215,031	45,350	56,588	13,034	776,300
Personal Services	49,960	85,656	68,137	16,327	28,277	5,043	253,400
Natural Resources	23,811	28,940	9,486	3,562	1,200	-	67,000
Professional and Business Services	124,324	147,976	154,286	38,174	103,453	28,785	597,000
Government Services	8,104	21,380	45,624	16,186	22,839	6,668	120,800
Transportation and Utilities Services	26,652	61,351	53,656	20,180	14,465	5,196	181,500
Wholesale and Retail Services	114,795	238,642	198,651	47,661	84,131	16,020	699,900
Total	923,503	1,501,649	1,378,243	372,140	655,222	194,042	5,024,800

Oklahoma							
Industry	Less than High School	High School/ GED	Some College	Associate's Degree	Bachelor's Degree	Graduate Degree	Total
Construction	61,418	75,030	48,521	7,702	5,729	-	198,400
Educational Services	4,212	20,390	29,918	5,625	23,698	20,856	104,700
Financial Services	5,092	15,052	32,904	7,909	7,539	3,403	71,900
Healthcare Services	27,792	83,274	86,315	30,937	34,710	12,371	275,400
Information Services	871	9,524	17,678	2,775	2,482	1,870	35,200
Leisure and Hospitality Services	70,838	101,816	68,607	10,906	12,009	4,824	269,000
Manufacturing	38,866	87,140	56,933	24,340	11,433	3,989	222,700
Personal Services	26,408	45,923	25,003	6,496	4,851	319	109,000
Natural Resources	10,163	40,912	20,930	1,559	4,298	637	78,500
Professional and Business Services	39,985	64,333	64,919	7,771	25,028	9,064	211,100
Government Services	1,129	13,008	17,350	4,135	8,399	3,179	47,200
Transportation and Utilities Services	9,205	44,062	12,584	3,836	16,213	-	85,900
Wholesale and Retail Services	44,833	129,753	79,793	16,059	26,078	3,084	299,600
Total	340,812	730,217	561,455	130,050	182,467	63,596	2,008,600

APPENDIX 3: EDUCATION DISTRIBUTION BY INDUSTRY BY STATE, 2020

South Carolina							
Industry	Less than High School	High School/ GED	Some College	Associate's Degree	Bachelor's Degree	Graduate Degree	Total
Construction	98,533	119,576	56,556	17,735	8,545	3,155	304,100
Educational Services	5,021	23,139	20,302	12,016	26,129	18,793	105,400
Financial Services	9,930	27,954	23,479	16,059	35,302	2,176	114,900
Healthcare Services	18,669	44,409	60,221	32,565	39,180	14,056	209,100
Information Services	1,478	9,088	6,450	5,638	6,174	4,471	33,300
Leisure and Hospitality Services	86,546	101,494	51,015	14,215	20,220	2,009	275,500
Manufacturing	68,946	133,381	85,913	31,039	29,392	3,830	352,500
Personal Services	33,736	42,803	39,727	11,910	10,191	5,433	143,800
Natural Resources	12,258	7,949	3,074	1,301	618	-	25,200
Professional and Business Services	54,220	88,018	65,602	22,170	37,201	10,889	278,100
Government Services	7,873	16,877	22,996	10,345	7,598	4,111	69,800
Transportation and Utilities Services	11,336	21,155	12,823	6,169	10,784	2,134	64,400
Wholesale and Retail Services	74,900	113,217	104,064	19,575	27,401	2,343	341,500
Total	483,446	749,060	552,222	200,737	258,735	73,400	2,317,600

Tennessee							
Industry	Less than High School	High School/ GED	Some College	Associate's Degree	Bachelor's Degree	Graduate Degree	Total
Construction	123,561	182,467	46,193	9,383	11,496	401	373,500
Educational Services	7,400	51,213	31,431	9,342	47,765	42,449	189,600
Financial Services	8,430	52,269	46,746	13,167	22,442	5,946	149,000
Healthcare Services	22,374	104,321	95,073	34,447	59,365	26,720	342,300
Information Services	3,396	13,267	14,735	386	14,431	2,885	49,100
Leisure and Hospitality Services	90,970	162,732	82,419	28,929	21,447	5,903	392,400
Manufacturing	104,609	226,046	104,008	17,992	33,797	4,947	491,400
Personal Services	38,450	67,750	29,218	9,522	12,851	11,509	169,300
Natural Resources	17,723	21,372	3,137	334	541	393	43,500
Professional and Business Services	69,450	98,966	93,048	33,906	45,215	13,415	354,000
Government Services	5,182	25,108	17,228	6,494	19,593	5,196	78,800
Transportation and Utilities Services	21,279	75,036	30,127	4,294	10,858	1,305	142,900
Wholesale and Retail Services	80,579	208,842	113,298	28,098	55,655	8,528	495,000
Total	593,403	1,289,389	706,661	196,294	355,456	129,597	3,270,800

APPENDIX 3: EDUCATION DISTRIBUTION BY INDUSTRY BY STATE, 2020

Texas							
Industry	Less than High School	High School/ GED	Some College	Associate's Degree	Bachelor's Degree	Graduate Degree	Total
Construction	627,991	542,982	311,414	62,267	62,287	8,361	1,615,300
Educational Services	50,175	184,564	181,185	60,735	362,804	181,437	1,020,900
Financial Services	70,514	195,901	275,936	58,332	175,287	34,329	810,300
Healthcare Services	258,958	354,479	478,562	148,743	191,042	71,517	1,503,300
Information Services	15,612	43,124	97,482	18,889	64,040	18,153	257,300
Leisure and Hospitality Services	489,988	511,259	382,536	59,525	129,045	30,247	1,602,600
Manufacturing	314,404	442,499	266,649	72,787	133,763	35,198	1,265,300
Personal Services	252,435	279,241	215,978	41,610	79,086	27,149	895,500
Natural Resources	122,154	137,999	89,384	13,909	31,419	8,835	403,700
Professional and Business Services	363,499	469,608	470,395	132,049	321,877	159,572	1,917,000
Government Services	14,663	84,386	163,800	40,478	77,811	26,663	407,800
Transportation and Utilities Services	122,887	210,362	181,769	30,651	48,675	5,457	599,800
Wholesale and Retail Services	415,302	737,883	653,370	124,752	206,764	60,329	2,198,400
Total	3,118,582	4,194,287	3,768,460	864,727	1,883,900	667,247	14,497,200

Virginia							
Industry	Less than High School	High School/ GED	Some College	Associate's Degree	Bachelor's Degree	Graduate Degree	Total
Construction	196,142	265,042	101,230	14,079	33,566	11,640	621,700
Educational Services	16,322	30,931	60,692	26,618	110,276	91,461	336,300
Financial Services	9,345	53,465	59,579	27,361	71,807	14,342	235,900
Healthcare Services	56,382	86,644	113,209	63,677	91,684	43,604	455,200
Information Services	6,722	27,149	24,091	1,193	28,374	14,171	101,700
Leisure and Hospitality Services	116,159	186,242	98,426	21,417	60,274	16,182	498,700
Manufacturing	71,602	145,588	103,696	26,566	35,790	25,558	408,800
Personal Services	57,204	81,269	40,087	9,290	33,203	24,347	245,400
Natural Resources	18,216	24,469	7,358	-	2,557	-	52,600
Professional and Business Services	78,908	169,999	132,366	40,245	136,485	82,496	640,500
Government Services	4,216	18,206	43,380	15,313	44,117	28,068	153,300
Transportation and Utilities Services	32,793	54,683	32,500	3,067	7,207	5,451	135,700
Wholesale and Retail Services	131,933	239,306	183,262	41,597	82,348	20,354	698,800
Total	795,944	1,382,993	999,876	290,423	737,688	377,674	4,584,600

APPENDIX 3: EDUCATION DISTRIBUTION BY INDUSTRY BY STATE, 2020

West Virginia							
Industry	Less than High School	High School/ GED	Some College	Associate's Degree	Bachelor's Degree	Graduate Degree	Total
Construction	13,508	62,839	23,195	2,184	1,173	-	102,900
Educational Services	610	7,039	5,194	-	7,849	7,108	27,800
Financial Services	402	4,875	7,038	2,348	5,238	-	19,900
Healthcare Services	7,818	42,156	43,514	13,861	12,495	2,755	122,600
Information Services	2,823	2,218	2,552	907	1,900	-	10,400
Leisure and Hospitality Services	27,012	50,310	16,381	3,713	5,334	5,149	107,900
Manufacturing	11,266	23,853	16,378	5,799	2,803	-	60,100
Personal Services	10,798	15,333	11,492	3,332	2,615	2,430	46,000
Natural Resources	3,522	18,423	4,658	-	2,078	919	29,600
Professional and Business Services	12,866	28,273	25,130	4,834	5,568	1,529	78,200
Government Services	5,505	5,034	9,550	193	3,683	1,235	25,200
Transportation and Utilities Services	10,558	14,595	4,577	2,369	-	-	32,100
Wholesale and Retail Services	20,577	65,107	45,834	6,633	4,988	3,961	147,100
Total	127,265	340,055	215,493	46,173	55,724	25,086	809,800

APPENDIX 4: JOB GROWTH BY INDUSTRY BY STATE, 2010-2020 (DETAIL)

State/ Region	Industry	2010	2020	Growth Rate
USA	Natural Resources	2,858,400	2,842,600	-1%
	Construction	7,862,200	8,509,700	8%
	Manufacturing	13,206,900	12,899,300	-2%
	Wholesale and Retail Services	21,688,200	23,816,200	10%
	Transportation and Utilities Services	5,969,300	6,595,400	10%
	Information Services	3,036,000	3,380,400	11%
	Financial Services	9,771,200	11,186,900	14%
	Professional and Business Services	19,048,700	22,738,000	19%
	Educational Services	2,708,300	3,434,000	27%
	Healthcare Services	15,915,800	20,271,400	27%
	Leisure and Hospitality Services	13,732,300	15,933,200	16%
	Personal Services	5,465,900	6,125,800	12%
	Government Services	23,198,800	25,918,600	12%
	Total	144,462,000	163,651,400	13%
ALABAMA	Natural Resources	42,500	36,800	-13%
	Construction	125,900	142,800	13%
	Manufacturing	280,200	285,500	2%
	Wholesale and Retail Services	326,700	366,500	12%
	Transportation and Utilities Services	83,200	91,600	10%
	Information Services	28,600	32,300	13%
	Financial Services	115,700	132,400	14%
	Professional and Business Services	238,100	296,400	24%
	Educational Services	20,700	25,300	22%
	Healthcare Services	190,100	246,400	30%
	Leisure and Hospitality Services	176,100	207,000	18%
	Personal Services	69,600	78,900	13%
	Government Services	395,800	442,800	12%
	Total	2,093,300	2,384,600	14%
ARKANSAS	Natural Resources	47,000	49,300	5%
	Construction	64,600	69,600	8%
	Manufacturing	178,100	188,100	6%
	Wholesale and Retail Services	184,500	201,000	9%
	Transportation and Utilities Services	73,800	82,900	12%
	Information Services	20,200	23,100	14%
	Financial Services	63,300	73,700	16%
	Professional and Business Services	126,200	161,000	28%
	Educational Services	12,300	17,500	42%
	Healthcare Services	145,300	184,700	27%
	Leisure and Hospitality Services	102,000	120,600	18%
	Personal Services	36,600	39,700	8%
	Government Services	221,800	257,400	16%
	Total	1,275,600	1,468,600	15%

APPENDIX 4: JOB GROWTH BY INDUSTRY BY STATE, 2010-2020 (DETAIL)

State/ Region	Industry	2010	2020	Growth Rate
DELAWARE	Natural Resources	2,700	2,500	-7%
	Construction	26,500	30,600	15%
	Manufacturing	32,200	29,500	-8%
	Wholesale and Retail Services	69,000	76,100	10%
	Transportation and Utilities Services	16,500	17,200	4%
	Information Services	7,100	8,400	18%
	Financial Services	50,600	55,800	10%
	Professional and Business Services	61,300	69,600	14%
	Educational Services	5,800	6,800	17%
	Healthcare Services	52,600	65,400	24%
	Leisure and Hospitality Services	40,800	45,600	12%
	Personal Services	16,700	19,900	19%
	Government Services	67,300	77,000	14%
	Total	449,100	504,400	12%
D.C.	Natural Resources	100	200	100%
	Construction	12,200	13,500	11%
	Manufacturing	1,700	1,600	-6%
	Wholesale and Retail Services	23,800	25,200	6%
	Transportation and Utilities Services	10,100	10,900	8%
	Information Services	21,400	22,400	5%
	Financial Services	29,900	33,500	12%
	Professional and Business Services	154,200	180,400	17%
	Educational Services	42,700	50,500	18%
	Healthcare Services	56,400	66,000	17%
	Leisure and Hospitality Services	56,900	64,900	14%
	Personal Services	63,200	73,900	17%
	Government Services	240,300	253,200	5%
	Total	713,000	796,300	12%
FLORIDA	Natural Resources	123,500	118,600	-4%
	Construction	538,700	533,000	-1%
	Manufacturing	359,900	355,400	-1%
	Wholesale and Retail Services	1,351,400	1,524,200	13%
	Transportation and Utilities Services	297,000	315,400	6%
	Information Services	158,800	171,100	8%
	Financial Services	665,200	795,600	20%
	Professional and Business Services	1,356,200	1,681,500	24%
	Educational Services	125,900	170,500	35%
	Healthcare Services	919,800	1,176,100	28%
	Leisure and Hospitality Services	948,900	1,113,100	17%
	Personal Services	319,400	379,500	19%
	Government Services	1,154,300	1,305,300	13%
	Total	8,318,900	9,639,300	16%

APPENDIX 4: JOB GROWTH BY INDUSTRY BY STATE, 2010-2020 (DETAIL)

State/ Region	Industry	2010	2020	Growth Rate
GEORGIA	Natural Resources	55,200	46,500	-16%
	Construction	240,300	253,600	6%
	Manufacturing	403,400	387,200	-4%
	Wholesale and Retail Services	706,000	777,400	10%
	Transportation and Utilities Services	214,600	246,600	15%
	Information Services	115,100	130,500	13%
	Financial Services	280,100	318,600	14%
	Professional and Business Services	596,800	699,100	17%
	Educational Services	68,700	96,900	41%
	Healthcare Services	393,700	536,500	36%
	Leisure and Hospitality Services	405,100	491,500	21%
	Personal Services	138,200	161,300	17%
	Government Services	753,300	838,500	11%
	Total	4,370,500	4,984,100	14%
KENTUCKY	Natural Resources	83,400	77,400	-7%
	Construction	95,200	92,800	-3%
	Manufacturing	240,100	234,400	-2%
	Wholesale and Retail Services	298,000	330,500	11%
	Transportation and Utilities Services	106,900	121,400	14%
	Information Services	29,900	33,900	13%
	Financial Services	107,300	119,100	11%
	Professional and Business Services	190,700	208,500	9%
	Educational Services	19,900	25,200	27%
	Healthcare Services	210,900	265,400	26%
	Leisure and Hospitality Services	174,900	201,800	15%
	Personal Services	61,900	66,500	7%
	Government Services	356,500	403,000	13%
	Total	1,975,700	2,179,900	10%
LOUISIANA	Natural Resources	78,200	81,400	4%
	Construction	150,300	174,700	16%
	Manufacturing	153,200	144,200	-6%
	Wholesale and Retail Services	305,300	322,600	6%
	Transportation and Utilities Services	93,700	100,700	7%
	Information Services	27,200	31,400	15%
	Financial Services	108,700	115,700	6%
	Professional and Business Services	220,400	245,100	11%
	Educational Services	24,500	28,500	16%
	Healthcare Services	222,800	269,800	21%
	Leisure and Hospitality Services	200,700	229,900	15%
	Personal Services	65,200	70,100	8%
	Government Services	380,400	410,600	8%
	Total	2,030,500	2,224,700	10%

APPENDIX 4: JOB GROWTH BY INDUSTRY BY STATE, 2010-2020 (DETAIL)

State/ Region	Industry	2010	2020	Growth Rate
MARYLAND	Natural Resources	14,900	13,600	-9%
	Construction	184,600	225,400	22%
	Manufacturing	126,400	113,700	-10%
	Wholesale and Retail Services	399,800	424,400	6%
	Transportation and Utilities Services	99,600	109,800	10%
	Information Services	52,300	56,500	8%
	Financial Services	189,600	221,200	17%
	Professional and Business Services	432,400	522,100	21%
	Educational Services	67,000	85,600	28%
	Healthcare Services	322,700	417,000	29%
	Leisure and Hospitality Services	247,200	290,300	17%
	Personal Services	108,600	124,200	14%
	Government Services	522,000	577,000	11%
	Total	2,767,000	3,180,900	15%
MISSISSIPPI	Natural Resources	39,500	35,700	-10%
	Construction	67,700	78,300	16%
	Manufacturing	158,800	174,300	10%
	Wholesale and Retail Services	180,200	209,500	16%
	Transportation and Utilities Services	56,300	65,000	15%
	Information Services	13,400	15,800	18%
	Financial Services	56,300	67,000	19%
	Professional and Business Services	104,500	123,800	18%
	Educational Services	12,300	15,200	24%
	Healthcare Services	115,300	145,700	26%
	Leisure and Hospitality Services	124,900	138,500	11%
	Personal Services	35,700	39,500	11%
	Government Services	269,500	296,100	10%
	Total	1,234,400	1,404,400	14%
NORTH CAROLINA	Natural Resources	57,200	47,200	-17%
	Construction	282,100	308,900	10%
	Manufacturing	509,000	501,800	-1%
	Wholesale and Retail Services	656,200	729,200	11%
	Transportation and Utilities Services	152,000	173,700	14%
	Information Services	73,500	85,900	17%
	Financial Services	253,700	294,500	16%
	Professional and Business Services	531,900	617,600	16%
	Educational Services	70,800	99,000	40%
	Healthcare Services	462,300	615,300	33%
	Leisure and Hospitality Services	408,000	480,800	18%
	Personal Services	141,700	156,400	10%
	Government Services	798,900	916,200	15%
	Total	4,397,300	5,026,400	14%

APPENDIX 4: JOB GROWTH BY INDUSTRY BY STATE, 2010-2020 (DETAIL)

State/ Region	Industry	2010	2020	Growth Rate
OKLAHOMA	Natural Resources	110,600	114,100	3%
	Construction	85,100	98,900	16%
	Manufacturing	148,300	149,700	1%
	Wholesale and Retail Services	236,300	253,700	7%
	Transportation and Utilities Services	68,300	72,700	6%
	Information Services	28,900	31,400	9%
	Financial Services	97,400	109,700	13%
	Professional and Business Services	192,700	228,600	19%
	Educational Services	16,900	20,600	22%
	Healthcare Services	177,000	214,000	21%
	Leisure and Hospitality Services	145,800	170,400	17%
	Personal Services	54,600	61,200	12%
	Government Services	342,400	382,100	12%
	Total	1,704,300	1,907,100	12%
SOUTH CAROLINA	Natural Resources	24,800	23,500	-5%
	Construction	121,300	125,200	3%
	Manufacturing	238,200	220,600	-7%
	Wholesale and Retail Services	310,100	347,000	12%
	Transportation and Utilities Services	76,700	87,200	14%
	Information Services	27,900	34,300	23%
	Financial Services	124,300	144,300	16%
	Professional and Business Services	236,500	267,200	13%
	Educational Services	24,300	31,500	30%
	Healthcare Services	165,000	213,500	29%
	Leisure and Hospitality Services	221,800	233,700	5%
	Personal Services	67,500	76,400	13%
	Government Services	386,200	423,500	10%
	Total	2,024,700	2,227,900	10%
TENNESSEE	Natural Resources	53,000	42,300	-20%
	Construction	147,300	180,300	22%
	Manufacturing	360,500	371,800	3%
	Wholesale and Retail Services	471,600	535,300	14%
	Transportation and Utilities Services	163,300	188,400	15%
	Information Services	49,800	54,300	9%
	Financial Services	173,400	205,300	18%
	Professional and Business Services	339,700	421,300	24%
	Educational Services	47,900	62,300	30%
	Healthcare Services	311,800	404,800	30%
	Leisure and Hospitality Services	282,000	315,300	12%
	Personal Services	98,600	113,500	15%
	Government Services	425,200	468,200	10%
	Total	2,924,200	3,363,200	15%

APPENDIX 4: JOB GROWTH BY INDUSTRY BY STATE, 2010-2020 (DETAIL)

State/ Region	Industry	2010	2020	Growth Rate
TEXAS	Natural Resources	415,200	478,600	15%
	Construction	734,100	894,700	22%
	Manufacturing	911,500	982,600	8%
	Wholesale and Retail Services	1,737,900	2,048,400	18%
	Transportation and Utilities Services	505,500	577,700	14%
	Information Services	221,200	247,500	12%
	Financial Services	783,400	948,900	21%
	Professional and Business Services	1,463,800	1,875,100	28%
	Educational Services	126,700	178,600	41%
	Healthcare Services	1,114,100	1,542,800	38%
	Leisure and Hospitality Services	1,042,200	1,334,400	28%
	Personal Services	381,100	447,800	18%
	Government Services	1,820,300	2,283,200	25%
	Total	11,257,100	13,840,300	23%
VIRGINIA	Natural Resources	40,800	35,200	-14%
	Construction	251,200	270,800	8%
	Manufacturing	267,500	256,300	-4%
	Wholesale and Retail Services	549,900	597,500	9%
	Transportation and Utilities Services	143,000	156,400	9%
	Information Services	90,500	100,800	11%
	Financial Services	230,600	276,700	20%
	Professional and Business Services	682,900	897,700	31%
	Educational Services	63,700	84,100	32%
	Healthcare Services	354,000	485,800	37%
	Leisure and Hospitality Services	352,600	396,800	13%
	Personal Services	155,800	177,400	14%
	Government Services	839,400	958,400	14%
	Total	4,021,900	4,693,800	17%
WEST VIRGINIA	Natural Resources	43,100	44,700	4%
	Construction	40,300	37,700	-6%
	Manufacturing	56,100	57,100	2%
	Wholesale and Retail Services	116,200	121,300	4%
	Transportation and Utilities Services	31,700	34,800	10%
	Information Services	11,300	12,300	9%
	Financial Services	33,200	35,500	7%
	Professional and Business Services	65,700	69,400	6%
	Educational Services	6,500	7,500	15%
	Healthcare Services	106,200	126,500	19%
	Leisure and Hospitality Services	73,800	85,800	16%
	Personal Services	27,700	29,700	7%
	Government Services	144,800	153,800	6%
	Total	756,700	816,100	8%

APPENDIX 5: JOBS BY STATE (DETAIL, IN MILLIONS OF JOBS)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Growth 2010-2020
Alabama	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.4	18%
Arkansas	1.3	1.3	1.3	1.3	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	15%
Delaware	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	16%
District of Columbia	0.6	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	16%
Florida	8.5	8.8	8.7	8.3	8.0	8.0	8.1	8.3	8.4	8.7	9.0	9.2	9.4	9.5	9.6	9.7	22%
Georgia	4.4	4.5	4.5	4.4	4.3	4.2	4.3	4.3	4.4	4.6	4.7	4.8	4.9	5.0	5.0	5.1	20%
Kentucky	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.1	15%
Louisiana	2.0	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.4	2.4	18%
Maryland	2.8	2.8	2.8	2.8	2.7	2.7	2.8	2.8	2.8	2.9	3.0	3.0	3.1	3.1	3.1	3.2	17%
Mississippi	1.2	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.4	1.4	19%
North Carolina	4.2	4.4	4.4	4.3	4.2	4.1	4.2	4.3	4.3	4.5	4.6	4.7	4.8	4.9	5.0	5.0	21%
Oklahoma	1.7	1.7	1.8	1.8	1.7	1.7	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.0	17%
South Carolina	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.3	18%
Tennessee	3.0	3.1	3.1	3.0	2.9	2.9	2.9	2.9	3.0	3.0	3.1	3.1	3.2	3.2	3.2	3.3	14%
Texas	10.9	11.3	11.5	11.5	11.5	11.5	11.9	12.2	12.4	12.8	13.2	13.5	13.8	14.1	14.3	14.5	26%
Virginia	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.9	4.0	4.1	4.2	4.3	4.4	4.5	4.5	4.6	21%
West Virginia	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	10%
TOTALS	51.8	53.2	53.5	52.2	51.3	51.1	52.1	53.0	53.9	55.4	56.9	58.1	59.3	60.1	60.8	61.5	20%

APPENDIX 6: JOBS BY INDUSTRY FOR THE SOUTHERN STATES (DETAIL, IN MILLIONS OF JOBS)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Growth 2010-2020
Accommodation and Food Services	3.6	3.7	3.8	3.7	3.7	3.7	3.8	3.9	3.9	4.0	4.2	4.2	4.3	4.4	4.4	4.5	22%
Administrative and Support and Waste Management and Remediation Services	3.6	3.8	3.8	3.5	3.3	3.4	3.6	3.7	3.8	3.9	4.0	4.2	4.3	4.4	4.4	4.5	32%
Agriculture, Forestry, Fishing and Hunting	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	-1%
Arts, Entertainment, and Recreation	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	23%
Construction	3.7	3.9	3.9	3.6	3.2	3.0	3.0	3.1	3.1	3.2	3.3	3.3	3.4	3.4	3.5	3.5	16%
Educational Services	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.3	29%
Finance and Insurance	2.3	2.4	2.4	2.5	2.6	2.7	2.7	2.8	2.9	3.0	3.1	3.2	3.3	3.3	3.4	3.4	28%
Government	6.8	6.9	6.9	6.8	7.0	7.0	7.0	7.1	7.2	7.4	7.6	7.8	7.9	8.0	8.1	8.1	16%
Health Care and Social Assistance	4.7	4.9	5.0	5.0	5.2	5.3	5.4	5.6	5.8	6.0	6.2	6.4	6.5	6.6	6.8	6.9	31%
Information	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	11%
Management of Companies and Enterprises	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	22%
Manufacturing	4.2	4.2	4.1	3.8	3.5	3.3	3.4	3.3	3.3	3.3	3.4	3.4	3.5	3.5	3.6	3.6	8%
Mining, Quarrying, and Oil and Gas Extraction	0.4	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	40%
Personal Services	2.8	2.9	3.0	2.9	2.9	2.9	2.9	3.0	3.0	3.1	3.2	3.3	3.3	3.4	3.4	3.4	20%
Professional, Scientific, and Technical Services	3.2	3.3	3.5	3.5	3.4	3.4	3.5	3.6	3.7	3.9	4.0	4.1	4.2	4.3	4.3	4.4	29%
Real Estate and Rental and Leasing	2.1	2.2	2.3	2.2	2.2	2.2	2.2	2.3	2.3	2.4	2.5	2.6	2.6	2.7	2.7	2.7	26%
Retail Trade	5.8	5.8	5.8	5.5	5.4	5.3	5.5	5.5	5.5	5.6	5.7	5.8	5.9	5.9	6.0	6.0	13%
Transportation and Warehousing	2.0	2.1	2.1	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	16%
Utilities	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	9%
Wholesale Trade	1.9	2.0	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.0	2.0	2.0	2.0	15%
TOTALS	51.8	53.2	53.5	52.2	51.4	51.1	52.1	53.0	53.9	55.4	56.9	58.1	59.3	60.1	60.8	61.5	20%

APPENDIX 7: JOBS BY OCCUPATION FOR THE SOUTHERN STATES (DETAIL, IN MILLIONS OF JOBS)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Blue Collar Occupations	12.4	12.7	12.5	11.9	11.0	10.7	11.0	11.0	11.0	11.2	11.4	11.7	11.9	12.0	12.1	12.3
Community Services and Arts Occupations	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.3	2.3	2.4	2.4	2.4	2.5
Education Occupations	2.7	2.8	2.8	2.8	2.8	2.9	2.9	2.9	3.0	3.1	3.2	3.3	3.4	3.4	3.5	3.5
Food and Personal Services Occupations	8.2	8.4	8.6	8.5	8.6	8.6	8.8	9.0	9.2	9.5	9.8	10.0	10.2	10.4	10.5	10.7
Healthcare Professional and Technical Occupations	2.2	2.2	2.3	2.3	2.3	2.3	2.4	2.5	2.5	2.6	2.7	2.8	2.8	2.9	2.9	3.0
Healthcare Support Occupations	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.5	1.6	1.6	1.6	1.7	1.7	1.8
Management and Professional Office Occupations	6.8	7.0	7.2	7.2	7.2	7.2	7.4	7.6	7.7	8.0	8.2	8.4	8.6	8.7	8.8	8.9
STEM Occupations	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.4	2.4	2.5	2.5	2.6	2.6
Sales and Office Support Occupations	14.2	14.6	14.6	14.1	13.8	13.7	14.0	14.1	14.3	14.7	15.1	15.4	15.6	15.8	15.9	16.1
Social Science Occupations	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3
TOTALS	51.8	53.2	53.5	52.2	51.4	51.1	52.1	53.0	53.9	55.4	56.9	58.1	59.3	60.1	60.8	61.5

APPENDIX 8: LARGEST EMPLOYERS BY STATE.

State	Rank*	List	Industry**	Type	Data source and year
ALABAMA		ALABAMA POWER CO. ELECTRIC	Transportation and Utilities Services		Authors' Correspondence with the State of Alabama Department of Industrial Relations, Labor Market Information Division, as of 2010
		ARMY	Armed Forces	Federal government	
		HUNTSVILLE HOSPITAL	Healthcare Services	Private	
		MOBILE EDUCATION BOARD	Government and Public Education Services	Local government	
		PILGRIMS PRIDE CORPORATION	Manufacturing	Private	
		REGIONS BANK	Financial Services	Private	
		US POSTAL SERVICE	Government and Public Education Services	Federal government	
		THE UNIVERSITY OF ALABAMA AT BIRMINGHAM ED	Government and Public Education Services	State government	
		THE UNIVERSITY OF ALABAMA AT BIRMINGHAM MED	Healthcare Services	State government	
		WAL-MART STORES, INC.	Wholesale and Retail Trade Services	Private	
ARKANSAS		BAXTER REGIONAL MEDICAL CENTER	Healthcare Services		Arkansas Economic Development Commission. http://arkansasedc.com/media/118399/arkansas%20largest%20employers.pdf , as of 2010
		CARGILL, INC.	Manufacturing	Private	
		CONWAY REGIONAL MEDICAL CENTER	Healthcare Services	Private	
		DOMTAR, A.W., INC.	Manufacturing	Private	
		EMERSON ELECTRIC COMPANY	Transportation and Utilities Services	Private	
		EVERGREEN PACKAGING, INC.	Manufacturing	Private	
		FRED'S, INC.	Wholesale and Retail Trade Services	Private	
		PALOMA INDUSTRIES, LTD (RHEEM)	Manufacturing	Private	
		SECURITAS SECURITY SERVICES USA, INC		Private	
		SIMMONS FIRST NATIONAL CORPORATION	Financial Services	Private	
		SMITHFIELD FOODS, INC	Manufacturing	Private	
		SUPERIOR INDUSTRIES INTERNATIONAL, INC	Manufacturing	Private	
		TARGET CORPORATION	Wholesale and Retail Trade Services	Private	
		WHITE COUNTY MEDICAL CENTER	Healthcare Services	Private	
		WHITE RIVER MEDICAL CENTER	Healthcare Services	Private	
	WINDSTREAM CORPORATION	Information Services	Private		

APPENDIX 8: LARGEST EMPLOYERS BY STATE.

State	Rank*	List	Industry**	Type	Data source and year
DELAWARE		A.I. DUPONT HOSPITAL FOR CHILDREN	Healthcare Services	Private	Authors' Correspondence with the State of Delaware Economic Development Office, Workforce Development Program, as of 2010
		ASTRAZENECA	Manufacturing	Private	
		BANK OF AMERICA BANK, N.A.	Financial Services	Private	
		BAYHEALTH MEDICAL CENTER	Healthcare Services	Private	
		CHRISTIANA CARE HEALTH SYSTEM	Healthcare Services	Private	
		DOVER AIR FORCE BASE	Armed Forces	Federal government	
		DUPONT CO..	Manufacturing	Private	
		MOUNTAIRE FARMS, INC.	Manufacturing	Private	
		UNIVERSITY OF DELAWARE	Government and Public Education Services	State government	
		WAL-MART STORES, INC.	Wholesale and Retail Trade Services	Private	
DISTRICT OF COLUMBIA	1	GEORGETOWN UNIVERSITY	Private Educational Services	Private	The District of Columbia Department of Employment Services. http://www.does.dc.gov/does/cwp/view,a,1233,q,538359.asp , as of 2009
	2	GEORGE WASHINGTON UNIVERSITY	Private Educational Services	Private	
	3	WASHINGTON HOSPITAL CENTER	Healthcare Services	Private	
	4	CHILDREN'S NATIONAL HOSPITAL	Healthcare Services	Private	
	5	HOWARD UNIVERSITY	Private Educational Services	Private	
	6	GEORGETOWN UNIVERSITY HOSPITAL	Healthcare Services	Private	
	7	AMERICAN UNIVERSITY	Private Educational Services	Private	
	8	FANNIE MAE	Financial Services	Private	
	9	THE CATHOLIC UNIVERSITY OF AMERICA	Private Educational Services	Private	
	10	PROVIDENCE HOSPITAL	Healthcare Services	Private	
FLORIDA	1	PUBLIX SUPERMARKET, INC.	Wholesale and Retail Trade Services	Private	The Authors' Correspondence with the State of Florida Agency for Workforce Innovation, Labor Market Statistics, including InfoGroup Data, as of 2010
	2	WAL-MART STORES, INC.	Wholesale and Retail Trade Services	Private	
	3	WINN DIXIE STORES, INC.	Wholesale and Retail Trade Services	Private	
	4	MIAMI-DADE COUNTY SCHOOL DISTRICT	Government and Public Education Services	Local government	
	5	MARRIOTT HOTELS		Private	
	6	HCA HEALTHCARE	Healthcare Services	Private	
	7	MCDONALD'S		Private	
	8	BROWARD COUNTY SCHOOL DISTRICT	Government and Public Education Services	Local government	
	9	HILTON HOTELS		Private	
	10	WALT DISNEY		Private	

APPENDIX 8: LARGEST EMPLOYERS BY STATE.

State	Rank*	List	Industry**	Type	Data source and year
GEORGIA		COBB COUNTY SCHOOL SYSTEM	Government and Public Education Services	Local government	State of Georgia, LaborMarket Explorer Information System. http://explorer.dol.state.ga.us/mis/top.htm , as of 2010
		DEKALB COUNTY SCHOOL SYSTEM	Government and Public Education Services	Local government	
		DELTA AIR LINES, INC.	Transportation and Utilities Services	Private	
		DEPARTMENT OF DEFENSE	Armed Forces	Federal government	
		GWINNETT COUNTY SCHOOL SYSTEM	Government and Public Education Services	Local government	
		PUBLIX SUPERMARKET, INC.	Wholesale and Retail Trade Services	Private	
		SHAW INDUSTRIES GROUP, INC.	Manufacturing	private	
		THE HOME DEPOT	Wholesale and Retail Trade Services	Private	
		THE KROGER CO.	Wholesale and Retail Trade Services	Private	
		WAL-MART STORES, INC.	Wholesale and Retail Trade Services	Private	
KENTUCKY	1	UNITED PARCEL SERVICE, INC.	Transportation and Utilities Services	Private	Cabinet for Economic Development. Kentucky Business & Industry Information System. http://www.thinkkentucky.com/KBIIS/KBIISIntro.aspx , as of 2010
	2	TOYOTA MOTOR CORPORATION	Manufacturing	Private	
	3	HUMANA, INC.	Healthcare Services	Private	
	4	FORD MOTOR CO..	Manufacturing	Private	
	5	GENERAL ELECTRIC CO..	Transportation and Utilities Services	Private	
	6	CITIGROUP	Financial Services	Private	
	7	FMR LLC	Financial Services	Private	
	8	AFFILIATED COMPUTER SERVICES, INC.	Information Services	Private	
	9	LEXMARK INTERNATIONAL, INC.	Manufacturing	Private	
	10	DELTA AIR LINES, INC.	Transportation and Utilities Services	Private	
LOUISIANA		FORT POLK/JOINT READINESS TRAINING CENTER	Armed Forces	Federal government	The Authors' Correspondence with the State of Louisiana Workforce Commission. Moody's Louisiana Précis Louisiana State Report. http://www.economy.com/store/product.asp?pub=1&cat=1 , as of 2010
		WAL-MART STORES, INC.	Wholesale and Retail Trade Services	Private	
		TURNER INDUSTRIES GROUP LLC	Manufacturing	Private	
		BARKSDALE AIR FORCE BASE	Armed Forces	Federal government	
		NAVAL AIR STATION JOINT RES. BASE NEW ORLEANS	Armed Forces	Federal government	
		OCHSNER CLINIC FOUNDATION	Healthcare Services	Private	
		HARRAH'S ENTERTAINMENT, INC.		Private	
		LSU HEALTH SCIENCES BOARD	Healthcare Services	State government	
		LOUISIANA STATE UNIVERSITY	Government and Public Education Services	State government	
		NORTHROP GRUMMAN CORPORATION	Manufacturing	Private	

APPENDIX 8: LARGEST EMPLOYERS BY STATE.

State	Rank*	List	Industry**	Type	Data source and year
MARYLAND		ADVENTIST HEALTHCARE	Healthcare Services	Private	Maryland Department of Labor Development. http://www.dlir.state.md.us/lmi/emplists/maryland.shtml , as of 2010
		GIANT FOOD STORES	Wholesale and Retail Trade Services	Private	
		HELIX HEALTH SYSTEM, INC.	Healthcare Services	Private	
		JOHNS HOPKINS HOSPITAL	Healthcare Services	Private	
		JOHNS HOPKINS UNIVERSITY	Education Services	Private	
		NORTHROP GRUMMAN CORPORATION	Manufacturing	Private	
		SAFEWAY	Wholesale and Retail Trade Services	Private	
		TARGETCORPORATION	Wholesale and Retail Trade Services	Private	
		UNIVERSITY OF MARYLAND MEDICAL SYSTEM	Healthcare Services	State government	
		WAL-MART STORES, INC.	Wholesale and Retail Trade Services	Private	
MISSISSIPPI		DESOTO COUNTY SCHOOL DISTRICT	Government and Public Education Services	Local government	The Authors' Correspondence with the State of Mississippi Department of Employment Security, Labor Market Information, as of 2010
		JACKSON PUBLIC SCHOOLS	Government and Public Education Services	Local government	
		KRLP, INC. & KRGP, INC. (T/A KROGER)	Wholesale and Retail Trade Services	Private	
		MS BAND OF CHOCTAW INDIANS	Government and Public Education Services	Local government	
		NORTH MS MEDICAL CENTER	Healthcare Services	Private	
		NORTHROP GRUMMAN SHIPBUILDING, INC.	Manufacturing	Private	
		SANDERSON FARMS, INC. - PROCESSING DIVISION	Manufacturing	Private	
		STATE OF MS	Government and Public Education Services	State government	
		TYSON FARMS, INC.	Manufacturing	Private	
		WAL-MART STORES, INC.	Wholesale and Retail Trade Services	Private	
NORTH CAROLINA	1	WAL-MART STORES, INC.	Wholesale and Retail Trade Services	Private	North Carolina Employment Security Commission. http://www.ncesc1.com/lmi/industry/Manufacturing_and_Non-Manufacturing_Employers.pdf , as of 2010
	2	DUKE UNIVERSITY	Private Educational Services	Private	
	3	FOOD LION LLC	Wholesale and Retail Trade Services	Private	
	4	WELLS FARGO BANK NA (A CORP)	Financial Services	Private	
	5	LOWES HOME CENTERS INC	Wholesale and Retail Trade Services	Private	
	6	BANK OF AMERICA NA	Financial Services	Private	
	7	HARRIS TEETER INC	Wholesale and Retail Trade Services	Private	
	8	SMITHFIELD FOODS INC	Manufacturing	Private	
	9	INTERNATIONAL BUSINESS MACHINES	Manufacturing	Private	
	10	BRANCH BANKING & TRUST COMPANY	Financial Services	Private	

APPENDIX 8: LARGEST EMPLOYERS BY STATE.

State	Rank*	List	Industry**	Type	Data source and year
OKLAHOMA	1	STATE OF OKLAHOMA	Government and Public Education Services	State government	Oklahoma Department of Commerce. http://www.okcommerce.gov/Libraries/Documents/Oklahoma_Major_Employers_2907081238.pdf , as of 2008
	2	WAL-MART STORES, INC.	Wholesale and Retail Trade Services	Private	
	3	TINKER AFB, INCLUDING THE OKLAHOMA CITY AIR LOGISTICS CENTER	Armed Forces	Federal government	
	4	US ARMY FIELD ARTILLERY CENTER & FORT SILL	Armed Forces	Federal government	
	5	US POSTAL SERVICE	Government and Public Education Services	Federal government	
	6	OKLAHOMA STATE UNIVERSITY	Government and Public Education Services	State government	
	7	UNIVERSITY OF OKLAHOMA	Government and Public Education Services	State government	
	8	AMERICAN AIRLINES & AA MAINTENANCE AND ENGINEERING CENTER	Transportation and Utilities Services	Private	
	9	TULSA PUBLIC SCHOOLS	Government and Public Education Services	Local government	
	10	CHEROKEE NATION OF OKLAHOMA	Government and Public Education Services	Local government	
SOUTH CAROLINA		BI-LO INC	Wholesale and Retail Trade Services	Private	The Authors' Correspondence with the State of South Carolina Department of Employment and Workforce, Industry Employment Statistics, as of 2010
		BLUE CROSS BLUE SHIELD OF SOUTH CAROLINA	Healthcare Services	Private	
		DEPARTMENT OF DEFENSE	Armed Forces	Federal government	
		GREENVILLE HOSPITAL SYSTEM	Healthcare Services	State government	
		MICHELIN NORTH AMERICA INC	Manufacturing	Private	
		PALMETTO HEALTH	Healthcare Services	Private	
		SCHOOL DISTRICT OF GREENVILLE	Government and Public Education Services	Local government	
		UNIVERSITY OF SOUTH CAROLINA	Government and Public Education Services	State government	
		US POSTAL SERVICE	Government and Public Education Services	Federal government	
		WAL-MART STORES, INC.	Wholesale and Retail Trade Services	Private	
TENNESSEE	1	BAPTIST MEMORIAL HOSPITAL EAST	Healthcare Services	Private	Tennessee Department of Labor and Workforce Development. http://www.sourcetn.org/ , as of 2010
	2	EASTMAN CHEMICAL CO..	Manufacturing	Private	
	3	GAYLORD OPRYLAND RESORT		Private	
	4	GM SPRING HILL PLANT	Manufacturing	Private	
	5	MED QUIST INC.	Information Services	Private	
	6	METHODIST HOSPITAL	Healthcare Services	Private	
	7	NISSAN NORTH AMERICA INC.	Manufacturing	Private	
	8	SHELBY COUNTY BOARD-ED.	Government and Public Education Services	Local government	
	9	ST. THOMAS HOSPITAL	Healthcare Services	Private	
	10	T.C. THOMPSON CHILDREN'S HOSPITAL	Healthcare Services	Private	

APPENDIX 8: LARGEST EMPLOYERS BY STATE.

State	Rank*	List	Industry**	Type	Data source and year
TEXAS	1	DELL INC	Professional and Business Services	Private	Texas Association of Business. http:// www.txbiz.org/ , as of 2012
	2	UNIV. OF TEXAS - AUSTIN	Government and Public Education Services	State government	
	3	UNIV. OF TEXAS MD ANDERSON CANCER CENTER	Healthcare Services	State government	
	4	ISS FACILITY SERVICE	Wholesale and Retail Trade Services	Private	
	5	BEARING POINT, INC.	Wholesale and Retail Trade Services	Private	
	6	UNIV. OF TEXAS - HEALTH SCIENCE CENTER	Healthcare Service	State government	
	7	LOCKHEED MARTIN, CORP.	Manufacturing	Private	
	8	HP ENTERPRISE SERVICE	Manufacturing	Private	
	9	TEXAS INSTRUMENTS, INC.	Manufacturing	Private	
	10	TEXAS HEALTH RESOURCES	Healthcare Services	Private	
VIRGINIA	1	U.S. DEPARTMENT OF DEFENSE	Government and Public Education Services	Federal government	Virginia Workforce Connection. http://www.vawc.virginia.gov/gsipub/index.asp?docid=427 , as of 2010
	2	WAL-MART STORES, INC.	Wholesale and Retail Trade Services	Private	
	3	FAIRFAX COUNTY PUBLIC SCHOOLS	Government and Public Education Services	Local government	
	4	NORTHROP GRUMMAN SHIPBUILDING, INC.	Manufacturing	Private	
	5	POSTAL SERVICE	Government and Public Education Services	Federal government	
	6	SENTARA HEALTHCARE	Healthcare Services	Private	
	7	FOOD LION LLC	Wholesale and Retail Trade Services	Private	
	8	COUNTY OF FAIRFAX	Government and Public Education Services	Local government	
	9	CITY OF VIRGINIA BEACH SCHOOLS	Government and Public Education Services	Local government	
	10	BOOZ, ALLEN AND HAMILTON	Information Services	Private	
WEST VIRGINIA	1	WAL-MART STORES, INC.	Wholesale and Retail Trade Services	Private	The Authors' Correspondence with the State of West Virginia, Work Force West Virginia, Labor Market Information, as of 2010
	2	WEST VIRGINIA UNIVERSITY	Government and Public Education Services	State government	
	3	WEST VIRGINIA UNIVERSITY HOSPITALS	Healthcare Services	State government	
	4	CHARLESTON AREA MEDICAL CENTER, INC.	Healthcare Services	Private	
	5	DEPARTMENT OF VETERANS AFFAIRS	Government and Public Education Services	State government	
	6	WEST VIRGINIA DEPT OF HIGHWAYS	Transportation and Utilities Services	State government	
	7	KANAWHA COUNTY BOARD OF EDUCATION	Government and Public Education Services	Local government	
	8	KROGER LIMITED PARTNERSHIP	Wholesale and Retail Trade Services	Private	
	9	US POSTAL SERVICES	Government and Public Education Services	Federal government	
	10	IRS DATA CENTER	Government and Public Education Services	Federal government	

* Those not ranked are listed in alphabetical order.
 ** Industry assigned by authors' research and naics codes contained in referenceusa database.

GEORGETOWN UNIVERSITY



Georgetown Public
Policy Institute

Center on Education and the Workforce

3300 Whitehaven Street, NW, Suite 5000
Washington, D.C. 20007
Mail: Campus Box 5714444, Washington, D.C. 20057
cew.georgetown.edu