

DRIVING
INNOVATION
FROM THE
MIDDLE

Middle-Skill Jobs in the American South's Economy

For the Southern Governors' Association
August 2011



NATIONAL SKILLS COALITION
Every worker. Every industry. A strong economy.

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The United States and the American South face a skills gap. A 2011 Manpower survey found the number of employers struggling to fill positions is at an all-time survey high despite a relatively stagnant unemployment rate. The survey documented that 52 percent of U.S. employers are experiencing difficulty filling mission-critical positions within their organizations, up from 14 percent in 2010. Middle-skill jobs, which require more than a high school diploma but not a four-year degree, featured prominently among the top ten “hardest to fill” jobs of 2011, with skilled trades topping the list.¹ A number of studies have found that America’s skills mismatches account for a portion of the increase in unemployment since the start of the Great Recession.² Taking immediate steps to address the skills gap is an economic necessity for the American South.

Longer term, there is little debate that education and training are critical to enhancing the competitiveness of U.S. businesses in the global economy, and to helping more workers obtain well-paying jobs and careers. Many emerging jobs in critical sectors such as health care, clean energy, and advanced manufacturing will be middle-skill jobs; that is, jobs that require education and training beyond high school, but not a four-year degree. Businesses demand a well-trained and highly educated workforce, and the unemployed—particularly laid off workers seeking to transition to new careers—will need multiple pathways into the labor market. American South states that adopt policies that expand access to education and training for workers at all levels will be positioned to meet the growing demand for higher skills and credentials.



From a workforce education perspective, what does it mean to foster an innovation economy? The reflexive response is to educate more scientists and engineers. But less often considered are the nearly twice as many skilled individuals who will be needed to bring their innovations to market.

The American South, like the rest of the country, continues to struggle with sustainable economic recovery and job creation. In April 2011, the unemployment rate for states and protectorates within the Southern Governors' Association fell to 9.2 percent, an improvement from the 9.6 percent unemployment rate in April of the previous year. While challenges remain, the American South's economy, like the nation as a whole, is slowly climbing back from recession.³

From the perspective of job creation, a number of indicators suggest that the American South is well positioned for a strong comeback. According to *The Business Journals*, ten of the nation's twenty best markets for small businesses, including the top four, are located in the South.⁴ In its 2011 survey of 500 CEOs, *Chief Executive Magazine* found that seven of the top states for business are in the American South.⁵

Short-term job creation and economic development strategies that improve the American South's business climate have been and will continue to be essential to steering the U.S. and individual states toward recovery. But long term, innovation will be essential to sustained job growth and productivity at home, and to restoring the country's competitive edge internationally. States and regions that want to be at the forefront of innovation must foster a transition from traditional manufacturing as the foundation of their economy to new high-tech fields such as biotechnology, clean energy, information technology, nanotechnology, and advanced manufacturing.⁶ Chief executives at the state and federal level must address fundamental economic competitiveness challenges that inhibit innovation in order to build thriving state, regional and national economies.

But from a workforce education perspective, what does it mean to foster an innovation economy? The reflexive response is to educate more scientists and engineers. A number of state and national indices look at factors such as the number of scientists and engineers in the workforce or the percentage of residents with bachelor's and advanced degrees as indicators of a workforce that can drive innovation.

When it comes to these traditional metrics of the innovation capacity of the workforce, some states in the American South do quite well while others are struggling. In the Kaufmann Foundation's 2010 New Economy Index, two southern states fell in the top five in a ranking of states by scientists and engineers as a percentage of the workforce, while seven southern states made up the bottom ten. *Forbes Magazine* found that contrary to assumptions about the Northeast, six southern cities topped its list of ten biggest "Brain Magnets" as measured by college educated migration growth.⁷

No doubt, highly skilled innovators with advanced education will be essential to building an innovation workforce in the American South. But less often considered are the nearly twice as many skilled individuals who will be needed to bring those innovations to market. Unfortunately, few analyses of the innovation capacity of a state's workforce take these increasingly technical jobs into account. These are the forgotten middle-skill jobs that require education beyond high school but not a four-year degree.

Middle-skill jobs are often forgotten because of conventional wisdom about the economy as a whole. That conventional wisdom holds that our nation has evolved into an hourglass economy with a small number of highly skilled, highly paid workers and a much larger number of low-skill, low-paid workers. Within such a model, middle-skill occupations are on the verge of extinction.

It's a bleak picture, to be sure. It's also a myth.

While 51 percent of current jobs are middle-skill, only 43 percent of the region's workers are currently trained to the middle-skill level, a gap that threatens to undermine economic growth and innovation efforts.



What is a middle-skill job?

One that requires training beyond high school, but not a four-year degree.

Who provides middle-skill training?

Employers, community colleges, apprenticeship programs, nonprofit community-based training organizations, and private career schools.

The truth is that middle-skill jobs, which require more than a high school education but not a four-year degree, currently make up the largest segment of jobs in the U.S. economy (nearly half), and will continue to do so for years to come.⁸

This national picture holds true in the American South. Middle-skill jobs account for 51 percent of the region's jobs today and will continue to account for the largest portion of jobs into the next decade. What's more, middle-skill jobs will account for 44 percent of job *openings* in the next decade, making them the engine of the American South's economy. But while 51 percent of current jobs are middle-skill, only 43 percent of the region's workers are currently trained to the middle-skill level, a gap that threatens to undermine economic growth and innovation efforts.

This brief examines the role of middle-skill jobs in the American South's economy and in key innovation industries, assesses the skills of the current workforce as well as the projected skills of the future workforce, and identifies the types of workers who will need to be targeted for training to close gaps. It finds that:

- The American South faces a middle-skill gap today.
- Based on educational projections, the region's middle-skill gap will widen without new efforts.
- Based on population projections, closing the gap will require strategies that specifically target adult workers long past the traditional K-12 to postsecondary pipeline.

Finally, this brief summarizes three workforce development strategies that can help states ensure they are educating a workforce that can truly drive innovation.

MIDDLE-SKILL JOBS IN THE AMERICAN SOUTH'S ECONOMY

The American South has always and will always rely on middle-skill workers. They are the environmental remediation technicians who will reclaim shuttered plants and the carpenters and welders who will rebuild those shells into new, more efficient factories with green heating and cooling systems. They are the machinists who will use new computer numerically controlled technologies to create new products for export. They are the chemical technicians who will help develop the medications that keep our families healthy and the skilled production workers who make those drugs a reality. They are the biomedical equipment technicians who keep sophisticated life-saving medical equipment safe and working. Middle-skill jobs pervade almost every industry in this country, from licensed practical nurses and radiological technicians, to claims adjusters and paralegals, to auto repair diagnosticians. Many middle-skill jobs are local, hands-on jobs, meaning that they are unlikely to be outsourced to other countries.

Many of these are well-paid jobs, offering workers a chance at economic security and prosperity. As illustrated in Table 1, many of these are jobs with good earning potential offering median earnings that exceed the region's overall average for 2010 of \$38,903.⁹ Of course not all middle-skill occupations pay well or have meaningful advancement opportunities. Skills are only part of the economic success equation. But nationally, growth in demand for many middle-skill occupations has been fast enough to generate not only strong employment growth, but also rapid growth in wages.¹⁰



Thirty Middle-Skill Jobs the American South Can't Live Without

Table 1. Projected Demand for 30 Middle-Skill Occupations, 2008-2018, United States¹¹

	Employment*		Net Change		Job	Median
	2008	2018	#*	%	Openings*	Annual
					2008-2018	Wages
						2008
Information Technology						
Computer support specialists	565.7	643.7	78	13.8	234.6	43,450
Research and Development						
Life, physical, and social science technicians, all other	64.7	73.3	8.6	13.3	36.4	40,050
Nuclear technicians	6.4	7	0.6	9.2	2.8	67,890
Advanced Manufacturing						
Maintenance and repair workers, general	1,361.30	1,509.20	147.9	10.9	357.5	33,710
Mixing and blending machine setters, operators, and tenders	141.5	163.5	21.9	15.5	46.1	31,280
Industrial machinery mechanics	287.7	308.6	20.9	7.3	62.4	43,670
Computer-controlled machine tool operators, metal and plastic	141	150.3	9.3	6.6	36.9	33,330
Aircraft mechanics and service technicians	121.5	129.3	7.8	6.4	31.4	51,390
Aircraft structure, surfaces, rigging, and systems assemblers	44.1	48.2	4.1	9.4	13.4	44,130
Avionics technicians	18.8	20.8	2	10.6	5.2	49,310
Aerospace engineering and operations technicians	8.7	8.9	0.2	2.3	1.8	55,040
Infrastructure/Construction (including green)						
Heating, air conditioning, and refrigeration mechanics and installers	308.2	394.8	86.6	28.1	136.2	39,680
Electricians	694.9	777.9	83	11.9	250.9	46,420
Plumbers, pipefitters, and steamfitters	494.7	570.5	75.8	15.3	175.5	45,640
Operating engineers and other construction equipment operators	404.5	453.2	48.7	12	118.2	39,270
Cement masons and concrete finishers	201	226.8	25.9	12.9	76.4	35,080
Civil engineering technicians	91.7	107.2	15.5	16.9	32.8	44,290
Environmental engineering technicians	21.2	27.5	6.4	30.1	10.4	41,100
Public Safety						
Fire fighters	310.4	367.9	57.5	18.5	152.8	44,260
Police and sheriff's patrol officers	661.5	718.8	57.3	8.7	227.9	51,410
Healthcare						
Registered nurses	2,618.70	3,200.20	581.5	22.2	1,039.00	62,450
Licensed practical and licensed vocational nurses	753.6	909.2	155.6	20.7	391.3	39,030
Dental hygienists	174.1	237	62.9	36.1	98.4	66,570
Radiologic technologists and technicians	214.7	251.7	37	17.2	68	52,210
Surgical technologists	91.5	114.7	23.2	25.3	46.3	38,740
Respiratory therapists	105.9	128.1	22.1	20.9	41.4	52,200
Cardiovascular technologists and technicians	49.5	61.4	11.9	24.1	19.1	47,010
Medical equipment repairers	41.4	52.6	11.3	27.2	23.2	41,520
Diagnostic medical sonographers	50.3	59.5	9.2	18.3	16.5	61,980
Nuclear medicine technologists	21.8	25.4	3.6	16.3	6.7	66,660

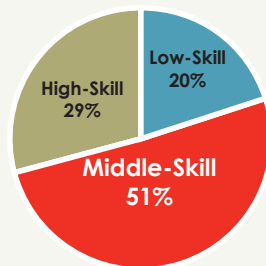
* Numbers in thousands

THE MIDDLE-SKILL GAP IN THE AMERICAN SOUTH'S ECONOMY, TODAY AND TOMORROW

Demand for Middle-Skill Jobs is Strong, Will Remain Strong in the American South

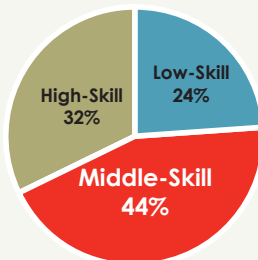
Over 50 percent of all jobs in 2009 were middle-skill jobs, representing more than 25 million workers (Fig. 1).

Figure 1. Jobs by Skill Level, American South, 2009¹²



In the decade between 2008 and 2018, 44 percent of all job openings will be middle-skill. This exceeds low-skill and high-skill job growth, which will account for 24 percent and 32 percent of projected openings respectively (Fig. 2).¹³

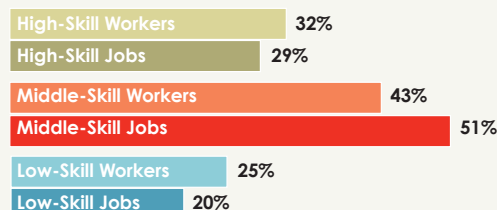
Figure 2. Job Openings by Skill Level, American South, 2008–2018¹⁴



The American South's Skills Mismatch: A Middle-Skill Gap

In the American South, the skill gap falls squarely in the middle. Accounting for 51 percent of the region's jobs, only 43 percent of the region's workers are trained to the middle-skill level, a gap that threatens to undermine economic growth and innovation efforts (Fig. 3).

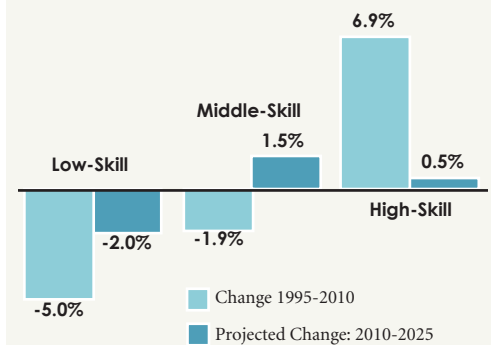
Figure 3. Jobs and Workers by Skill Level, American South, 2009¹⁵



The American South's Future Middle-Skill Gap: Educational Attainment Past and Future

Educational projections for the American South (Fig. 4) suggest that the region is likely to face a continued shortage of middle-skill workers in the future. During the fifteen years between 1995 and 2010, the region saw an increase in residents with educational attainment at the high-skill level, while the number of residents with middle- and low-skill education levels decreased. The region's projected education trends for the subsequent fifteen years suggest that while there will be a slight uptick in middle-skill educational attainment, middle-skill worker shortages will continue.

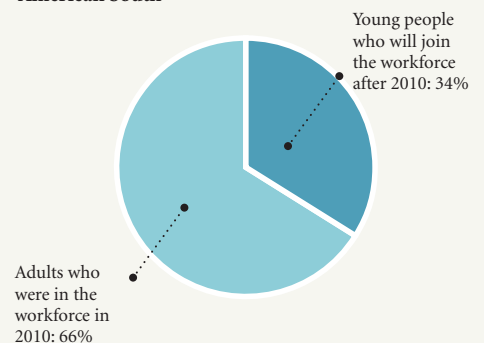
Figure 4. Percentage Change in Educational Attainment, American South, 1995–2025¹⁶



The Region's Workforce of Tomorrow is in the Workforce Today

The American South cannot address its middle-skill challenges by focusing its education and training resources solely on the next generation of workers coming out of high school. Two-thirds of the people who will be in the region's workforce in the year 2025 were already working adults in 2010—long past the traditional high school-to-college pipeline (Fig. 5).

Figure 5. The Composition of the 2025 Workforce, American South¹⁷





THE MIDDLE-SKILL GAP IN INNOVATION INDUSTRIES

To be at the forefront of innovation, states must successfully transition from traditional manufacturing to new high-tech fields such as biotechnology, clean energy, information technology, and advanced manufacturing. Middle-skill jobs play a central role in these Science, Technology, Engineering and Math (or STEM) industries. According to the National Science Foundation, the availability of middle-skilled technicians in fields such as advanced manufacturing, biotechnology, nanotechnology, environmental technology, information technology, cyber security, and telecommunications influences decisions about where new companies locate and what products they make.¹⁸

According to the U.S. Department of Labor, the challenge facing the STEM workforce pipeline, “is not just about the supply and quality of the baccalaureate and advance degree earners. A large percentage of the workforce in industries and occupations that rely on STEM knowledge and skills are technicians, including others who enter and advance in their field through subbaccalaureate degrees and certificates or through workplace training.”¹⁹

Advanced Manufacturing

A 2009 survey of manufacturers by Deloitte, The Manufacturing Institute, and Oracle found that almost one-third of companies report some level of skill shortages. While 36 percent of respondents reported moderate to serious shortages of engineers and scientists, 51 percent reported moderate to serious shortages of skilled production workers (machinists, operators, craft workers, distributors, and technicians), precisely the kind of middle-skill jobs that require skills training beyond high school but not a four-year degree. The survey found shortages of middle-skill workers are particularly acute in high-tech and innovation manufacturing sectors. Shortages of skilled production workers were reported by 74 percent of Aerospace and Defense respondents, 58 percent of Energy respondents, and 66 percent of Life Science and Medical Devices respondents.²⁰ Other industry surveys have found acute shortages of workers to fill particular middle-skill occupations that are critical across a number of manufacturing sectors. One report found that the U.S. must produce at least another 30,000 welding professionals per year just to address the projected new and replacement worker needs between 2010 and 2019.²¹

Clean Energy

A 2008 report by the Center on Wisconsin Strategy, the Apollo Alliance, and National Skills Coalition found that the skills needed in the green economy closely mirror the middle-skill demands of the labor market as a whole.²² In 2004, 66 percent of energy efficiency jobs, 71 percent of wind energy jobs, and 56 percent of biofuel jobs were middle-skill.²³

Information Technology

An analysis by the Migration Policy Institute finds that “despite the high-skill bias of the [information technology] sector, opportunities present themselves in the middle-skilled occupations for less highly educated workers.”²⁴ For example, employment of computer support specialists—a key middle-skill occupation—is expected to increase by 14 percent from 2008 to 2018, which is faster than the average for all occupations. Employment of network and computer systems administrators is expected to increase by 23 percent during the same time period, much faster than the average for all occupations.²⁵

The Automotive Manufacturing Technical Education Collaborative (AMTEC), a sector partnership of 30 community colleges, 34 auto-related plants and other workforce stakeholders in 23 states set a goal to produce the multi-skilled workers needed by the American auto manufacturing industry. The partnership identified and implemented wide-ranging improvements in technical education.

The Arkansas Career Pathways Initiative seeks to increase adult postsecondary credential attainment by institutionalizing an alternative training delivery model that better meets the unique needs of adult students, particularly low-income adults.

Skills2Compete-Maryland is a state initiative to increase the skills of Maryland's workforce by 20 percent by 2012. The state has developed a cross-agency strategy for measuring a diversity of skills outcomes as potential markers of success—not just degree completion, but also the attainment of other industry-recognized credentials, as well as transitions of low-skilled individuals onto new career pathways.

STATE STRATEGIES FOR CLOSING MIDDLE-SKILL GAPS, DRIVING INNOVATION

To close their middle-skill gaps and drive an innovation economy, states can adopt a three-part policy framework that cuts across agencies and programs to support a robust workforce development system that responds to the reality of today's labor market needs. By drawing on a set of core strategies—sector partnerships, career pathways, and counting middle-skill credentials—states can grow an innovation workforce.

Sector Partnerships

To foster an innovation economy, states must ensure that investments in training and education are targeted to meet the full range of skill needs of local industries, and that all stakeholders connected to those industries are engaged to ensure the greatest return for local workers and firms. Sector partnerships do this by creating capacity to organize key stakeholders connected to an industry—multiple firms, labor, education and training providers, community-based organizations, trade associations, and the workforce and education systems—to develop customized solutions for that industry at the regional level. Rather than one company and one educational institution forming a partnership with limited returns, sector partnerships promote growth and competitiveness across an entire industry by developing immediate strategies to fill pressing skilled workforce needs, as well as long-term plans to grow the industry with a better trained and more productive workforce. In addition, these partnerships improve worker training, retention and advancement by developing cross-firm skill standards, career pathways, job redefinitions, and shared training and support capacities that facilitate the advancement of workers at all skill levels, including the least skilled.

Career Pathways

As mentioned previously, two-thirds of the southern workforce of 2025 was already in the workforce in 2010, beyond the reach of K-12 or traditional college access policy reforms. Career pathways expand access to workforce education and training for all workers by better aligning adult basic education, job training and higher education systems to create pathways to postsecondary educational credentials for people while they continue to work and support their families. Career pathways ease transitions between programs and across institutions; expand investments in education and training, particularly for “non-traditional” students; and provide supports and services that allow individuals enrolled in education and training programs to succeed. Career pathways adapt existing programs and services—and add new ones—to enable individuals to advance to successively higher levels of education and employment. Where most effective, career pathways help transform institutions and organizations involved in education, employment and social services by strengthening cooperation to improve capacity to respond to the needs of workers and employers.

Counting Middle-Skill Credentials

In the current fiscal climate it is more important than ever for states to allocate education and training resources to achieve better outcomes for workers, industries, and the economy as a whole. But states must first be able to measure what their current investments are buying before they can hold those investments accountable to the demands of the labor market. That requires the collection and alignment of outcome data across the full range of agencies that administer human capital investments. But the measures that most states currently used for these investments do not document whether programs across all state agencies are preparing people for skilled jobs in the labor market. While public policy tracks attainment of traditional high school and college degrees, it tends to ignore most of the middle-skill credentials required for the majority of skilled occupations in today's economy. Some states have begun to track such credential data, and therefore know the skills they are producing with their workforce investments. Without this information, policymakers cannot set targets for raising the skills of a state's workforce or provide critical and persuasive information about the skills of the workforce to businesses considering locating in the state. As states are being called to do more with less, it is more important than ever for state leaders to support stronger collaboration across their education and training systems to collect credential data and use this data to set goals and measure progress to strengthen the workforce.



WHAT GOVERNORS CAN DO TO CLOSE THE MIDDLE-SKILL GAP, DRIVE INNOVATION

Set a bold goal for the number of residents to be trained with market-ready skills.

Set a goal for your state that specifically brings attention to the number of residents who need to be trained for the region's middle-skill jobs. For example, in March 2010, Governor Martin O'Malley publicly pledged to increase the number of Marylanders who receive training or postsecondary education by 20 percent by 2012, with attention to filling middle-skill jobs and including adults with low basic skills. Such a goal sends a message to industry that you are serious about meeting their skill needs and to everyone in your state that they are part of that solution.

Change perceptions of middle-skill jobs.

Use the visibility of your office to change perceptions about the importance of middle-skill jobs to your state's key industries, and about the potential value of middle-skill and technical training for an individual's future prosperity. Deliver a consistent message to the press, to parents, to job seekers and to the broader public that middle-skill credentials are a smart choice, not a second choice to four-year degrees.

Make sure training dollars go toward in-demand credentials aligned with real jobs.

Establish a cross-agency taskforce (or use an existing one) to lead an assessment of what credentials are being generated—including industry-recognized certificates, certifications and degrees—across the entirety of your state's human capital investments. Assess annually, how public dollars are being allocated between middle- and high-skill credentials, and assess if those relative spending levels mirror the distribution of credential demand in the labor market. Publicly report on your progress each year.

Your community colleges and public universities: Are they filling the gap?

Do you know how many state residents in your public postsecondary institutions are pursuing middle-skill credentials for immediate employment versus longer-term degrees? Do you know how successful middle-skill students are at completing their studies and finding employment in their field relative to your state's four-year college students? Commission a study.

Attend a meeting of your Workforce Investment Board.

Consider going to a state Workforce Investment Board (WIB) meeting. Ask your WIB about their plan for closing the state's middle-skill gap. You appointed your WIB and it's critical that they support your workforce agenda.

Convene industry leaders in a partnership strategy targeting open middle-skill positions.

Identify your state's top ten demand industries. Convene industry leaders, and ask them to identify the key middle-skill occupations for which they cannot find trained workers. Set specific targets for filling those priority occupations. Leverage state, federal and philanthropic resources in regional sector partnerships of employers and other stakeholder to define the middle-skill credentials they're seeking. Require institutions to train to those specs.

A FINAL WORD ON DRIVING INNOVATION FROM THE MIDDLE

The American South's need for qualified middle-skill workers today is as great as ever. As economic recovery gathers momentum, and economic development investments pay off in new jobs, existing and emerging job vacancies will need to be filled. Investments in an innovation economy will pay off only if a base of middle-skilled talent is in place to meet projected demand for skills in new innovation industries. But as states focus on growing the middle-skilled workforce to support these new innovation industries, they can't forget the "old" industries that have traditionally served as the backbone of their economies. All of these industries, including manufacturing, construction, and others must innovate technologically to survive and their survival demands a new kind of workforce. A 2011 report on North Carolina's workforce found that the recession accelerated the state's shift to a knowledge based economy and that industries that traditionally have relied on a large available low-skilled labor pool will need more highly skilled workers to survive. The report found that many North Carolina workers, "incumbent and dislocated alike as well as a large share of current jobseekers are simply not prepared for the transition and face severe challenges in adapting to this new economic reality."²⁶

This economic reality and these skill challenges do not set North Carolina apart from the region. They do not set the South apart from the rest of the nation. What will set the South and individual states apart is how they respond to these challenges. States that make targeted investments and policy reforms aimed at closing the middle-skill gap will be in the best position to survive the innovation transition in old industries, grow new innovation industries, support job creation, and prepare the state for better times ahead.

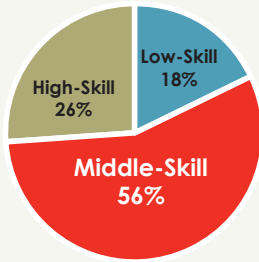


ALABAMA

Jobs: Demand for Middle-Skill Jobs is Strong

Over 50 percent of all jobs in 2009 were middle-skill jobs.

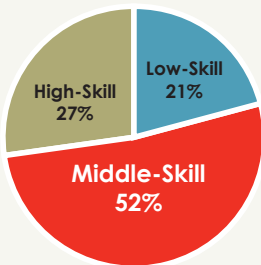
Jobs by Skill Level, Alabama, 2009



Job Openings: Demand for Middle-Skill Jobs Will Remain Strong

In the decade between 2008 and 2018, 52 percent of all job openings will be middle-skill.

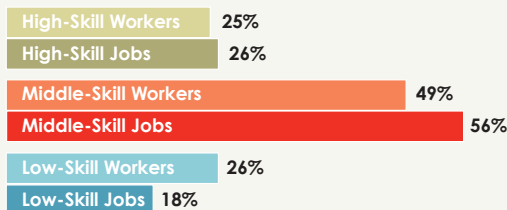
Job Openings by Skill Level, Alabama, 2008–2018



A Middle-Skill Gap

Middle-skill jobs account for 56 percent of Alabama's labor market, but only 49 percent of the state's workers are currently trained to the middle-skill level.

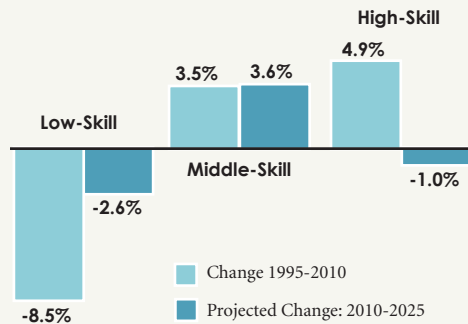
Jobs and Workers by Skill Level, Alabama, 2009



Middle-Skill Gap Will Persist

Educational projections for Alabama suggest that the state is likely to face a continued shortage of middle-skill workers in the future. During the fifteen years between 1995 and 2010, the state saw an increase in residents with educational attainment at the middle- and high-skill level, while the number of residents with low-skill education levels decreased. The state's projected education trends for the subsequent fifteen years suggest that while there will be a slight uptick in middle-skill educational attainment, middle-skill worker shortages will continue.

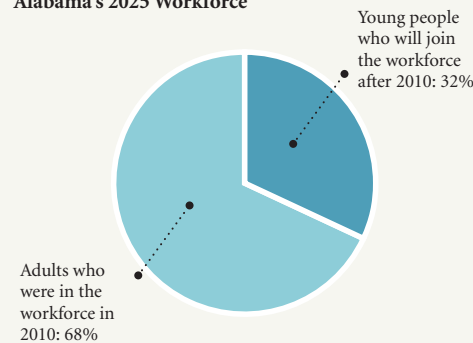
Percentage Change in Educational Attainment, Alabama, 1995–2025



The Workforce of Tomorrow is in the Workforce Today

Alabama cannot address its middle-skill challenges by focusing its education and training resources solely on the next generation of workers coming out of high school. Over two-thirds of the people who will be in the state's workforce in the year 2025 were already working adults in 2010—long past the traditional high school-to-college pipeline.

Alabama's 2025 Workforce



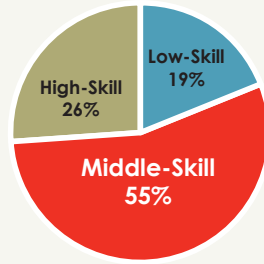
For sources and methodology, see endnotes for comparable regional charts in main report.

ARKANSAS

Jobs: Demand for Middle-Skill Jobs is Strong

Over 50 percent of all jobs in 2009 were middle-skill jobs.

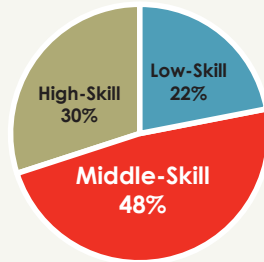
Jobs by Skill Level, Arkansas, 2009



Job Openings: Demand for Middle-Skill Jobs Will Remain Strong

In the decade between 2008 and 2018, 48 percent of all job openings will be middle-skill.

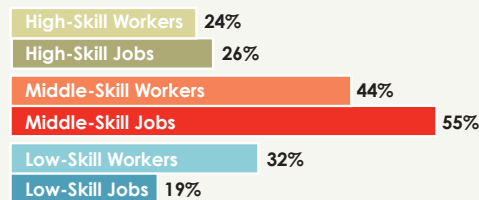
Job Openings by Skill Level, Arkansas, 2008–2018



A Middle-Skill Gap

Middle-skill jobs account for 55 percent of Arkansas' labor market, but only 44 percent of the state's workers are currently trained to the middle-skill level.

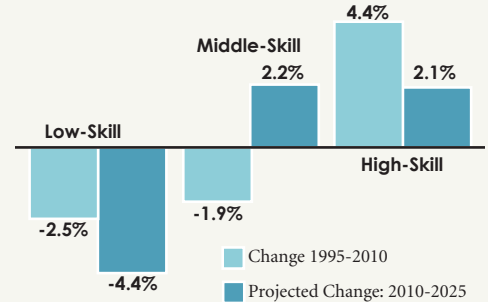
Jobs and Workers by Skill Level, Arkansas, 2009



Middle-Skill Gap Will Persist

Educational projections for Arkansas suggest that the state is likely to face a continued shortage of middle-skill workers in the future. During the fifteen years between 1995 and 2010, the state saw an increase in residents with educational attainment at the high-skill level, while the number of residents with middle- and low-skill education levels decreased. The state's projected education trends for the subsequent fifteen years suggest that while there will be a slight uptick in middle-skill educational attainment, middle-skill worker shortages will continue.

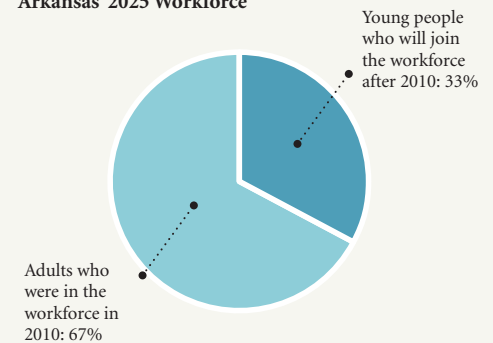
Percentage Change in Educational Attainment, Arkansas, 1995–2025



The Workforce of Tomorrow is in the Workforce Today

Arkansas cannot address its middle-skill challenges by focusing its education and training resources solely on the next generation of workers coming out of high school. Two-thirds of the people who will be in the state's workforce in the year 2025 were already working adults in 2010—long past the traditional high school-to-college pipeline.

Arkansas' 2025 Workforce

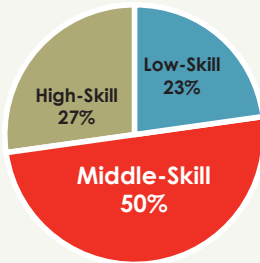


FLORIDA

Jobs: Demand for Middle-Skill Jobs is Strong

Half of all jobs in 2009 were middle-skill jobs.

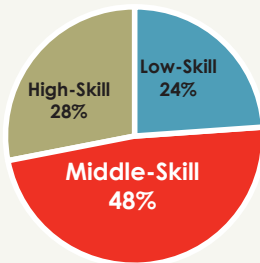
Jobs by Skill Level, Florida, 2009



Job Openings: Demand for Middle-Skill Jobs Will Remain Strong

In the decade between 2008 and 2018, 48 percent of all job openings will be middle-skill.

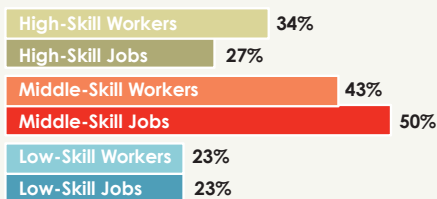
Job Openings by Skill Level, Florida, 2008–2018



A Middle-Skill Gap

Middle-skill jobs account for 50 percent of Florida’s labor market, but only 43 percent of the state’s workers are currently trained to the middle-skill level.

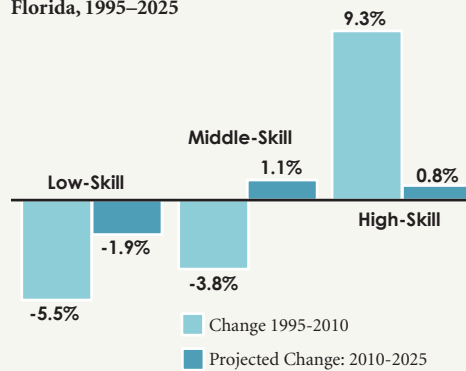
Jobs and Workers by Skill Level, Florida, 2009



Middle-Skill Gap Will Persist

Educational projections for Florida suggest that the state is likely to face a continued shortage of middle-skill workers in the future. During the fifteen years between 1995 and 2010, the state saw an increase in residents with educational attainment at the high-skill level, while the number of residents with middle- and low-skill education levels decreased. The state’s projected education trends for the subsequent fifteen years suggest that while there will be a very slight uptick in middle-skill educational attainment, middle-skill worker shortages will continue.

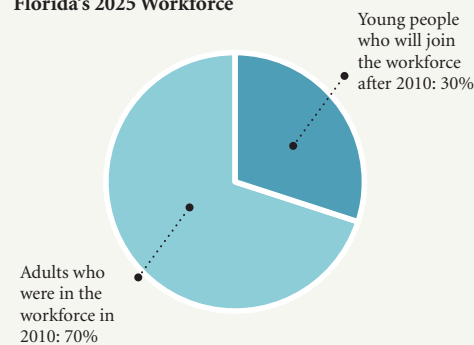
Percentage Change in Educational Attainment, Florida, 1995–2025



The Workforce of Tomorrow is in the Workforce Today

Alabama cannot address its middle-skill challenges by focusing its education and training resources solely on the next generation of workers coming out of high school. Over two-thirds of the people who will be in the state’s workforce in the year 2025 were already working adults in 2010—long past the traditional high school-to-college pipeline.

Florida’s 2025 Workforce

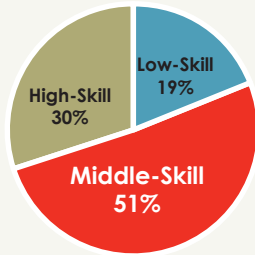


GEORGIA

Jobs: Demand for Middle-Skill Jobs is Strong

Over 50 percent of all jobs in 2009 were middle-skill jobs.

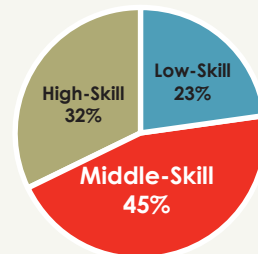
Jobs by Skill Level, Georgia, 2009



Job Openings: Demand for Middle-Skill Jobs Will Remain Strong

In the decade between 2008 and 2018, 45 percent of all job openings will be middle-skill.

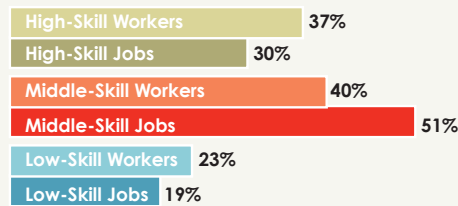
Job Openings by Skill Level, Georgia, 2008–2018



A Middle-Skill Gap

Middle-skill jobs account for 51 percent of Georgia’s labor market, but only 40 percent of the state’s workers are currently trained to the middle-skill level.

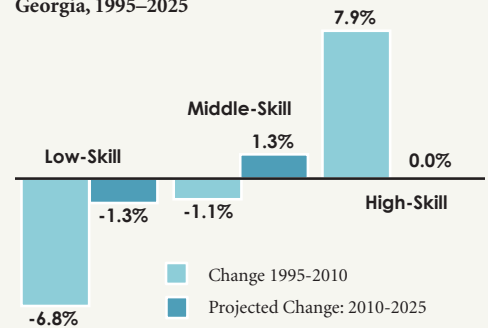
Jobs and Workers by Skill Level, Georgia, 2009



Middle-Skill Gap Will Persist

Educational projections for Georgia suggest that the state is likely to face a continued shortage of middle-skill workers in the future. During the fifteen years between 1995 and 2010, the state saw an increase in residents with educational attainment at the high-skill level, while the number of residents with middle- and low-skill education levels decreased. The state’s projected education trends for the subsequent fifteen years suggest that while there will be a very slight uptick in middle-skill educational attainment, middle-skill worker shortages will continue.

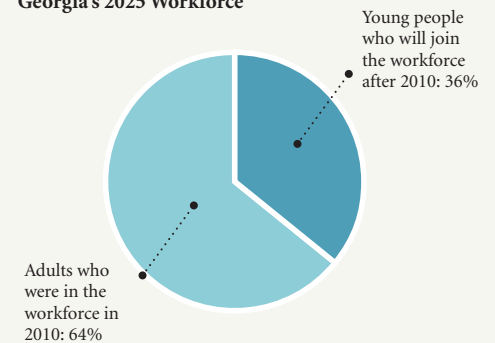
Percentage Change in Educational Attainment, Georgia, 1995–2025



The Workforce of Tomorrow is in the Workforce Today

Georgia cannot address its middle-skill challenges by focusing its education and training resources solely on the next generation of workers coming out of high school. Nearly two-thirds of the people who will be in the state’s workforce in the year 2025 were already working adults in 2010—long past the traditional high school-to-college pipeline.

Georgia’s 2025 Workforce

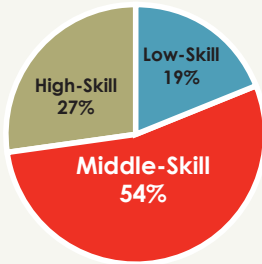


KENTUCKY

Jobs: Demand for Middle-Skill Jobs is Strong

Over 50 percent of all jobs in 2009 were middle-skill jobs.

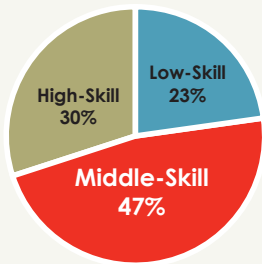
Jobs by Skill Level, Kentucky, 2009



Job Openings: Demand for Middle-Skill Jobs Will Remain Strong

In the decade between 2008 and 2018, 47 percent of all job openings will be middle-skill.

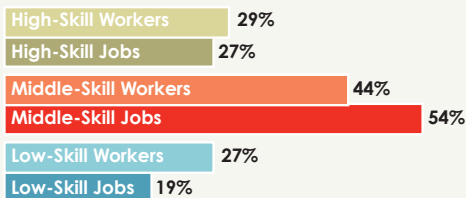
Job Openings by Skill Level, Kentucky, 2008–2018



A Middle-Skill Gap

Middle-skill jobs account for 54 percent of Kentucky’s labor market, but only 44 percent of the state’s workers are currently trained to the middle-skill level.

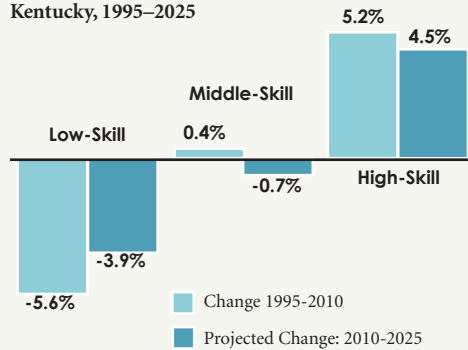
Jobs and Workers by Skill Level, Kentucky, 2009



Middle-Skill Gap Will Persist

Educational projections for Kentucky suggest that the state is likely to face a continued shortage of middle-skill workers in the future. During the fifteen years between 1995 and 2010, the state saw an increase in residents with educational attainment at the high-skill level and a very slight increase in residents at the middle-skill level, while the number of residents with low-skill education levels decreased. The state’s projected education trends for the subsequent fifteen years indicate that there will be a decrease in middle-skill educational attainment, suggesting that middle-skill worker shortages will continue.

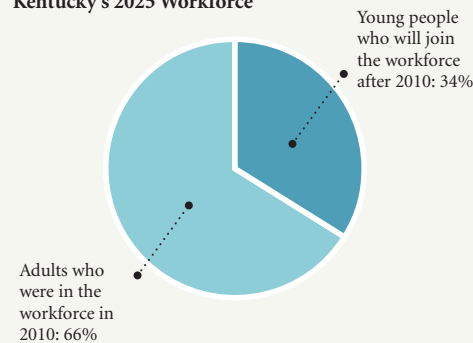
Percentage Change in Educational Attainment, Kentucky, 1995–2025



The Workforce of Tomorrow is in the Workforce Today

Kentucky cannot address its middle-skill challenges by focusing its education and training resources solely on the next generation of workers coming out of high school. Two-thirds of the people who will be in the state’s workforce in the year 2025 were already working adults in 2010—long past the traditional high school-to-college pipeline.

Kentucky’s 2025 Workforce

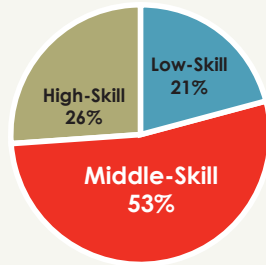


LOUISIANA

Jobs: Demand for Middle-Skill Jobs is Strong

Over 50 percent of all jobs in 2009 were middle-skill jobs.

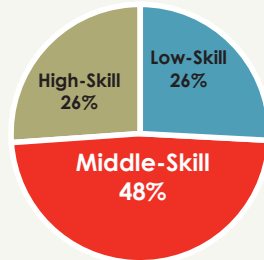
Jobs by Skill Level, Louisiana, 2009



Job Openings: Demand for Middle-Skill Jobs Will Remain Strong

In the decade between 2008 and 2018, 48 percent of all job openings will be middle-skill.

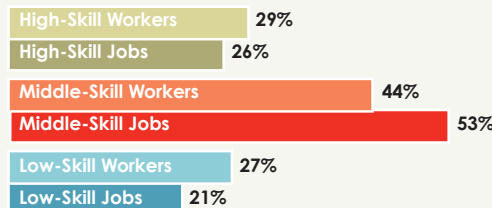
Job Openings by Skill Level, Louisiana, 2008–2018



A Middle-Skill Gap

Middle-skill jobs account for 53 percent of Louisiana’s labor market, but only 44 percent of the state’s workers are currently trained to the middle-skill level.

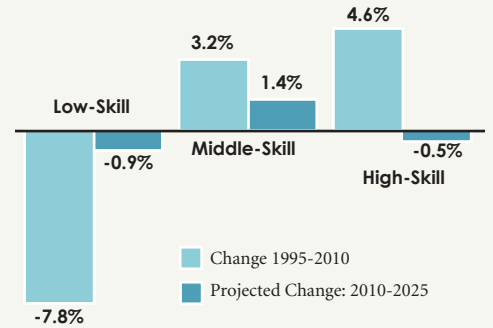
Jobs and Workers by Skill Level, Louisiana, 2009



Middle-Skill Gap Will Persist

Educational projections for Louisiana suggest that the state is likely to face a continued shortage of middle-skill workers in the future. During the fifteen years between 1995 and 2010, the state saw an increase in residents with educational attainment at the middle- and high-skill level, while the number of residents with low-skill education levels decreased. The state’s projected education trends for the subsequent fifteen years suggest that while there will be a very slight uptick in middle-skill educational attainment, middle-skill worker shortages will continue.

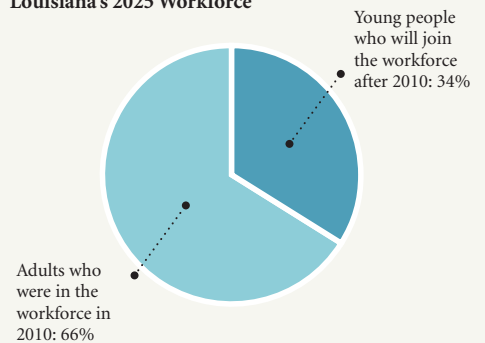
Percentage Change in Educational Attainment, Louisiana, 1995–2025



The Workforce of Tomorrow is in the Workforce Today

Louisiana cannot address its middle-skill challenges by focusing its education and training resources solely on the next generation of workers coming out of high school. Two-thirds of the people who will be in the state’s workforce in the year 2025 were already working adults in 2010—long past the traditional high school-to-college pipeline.

Louisiana’s 2025 Workforce

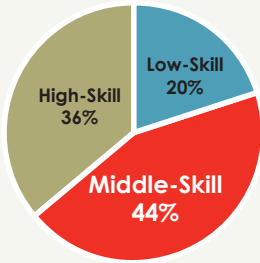


MARYLAND

Jobs: Demand for Middle-Skill Jobs is Strong

Nearly 50 percent of all jobs in 2009 were middle-skill jobs.

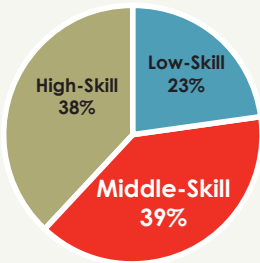
Jobs by Skill Level, Maryland, 2009



Job Openings: Demand for Middle-Skill Jobs Will Remain Strong

In the decade between 2008 and 2018, 39 percent of all job openings will be middle-skill.

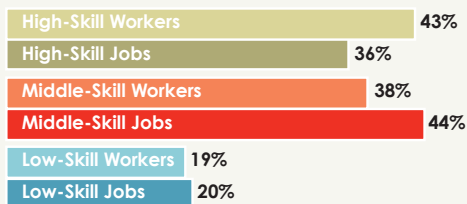
Job Openings by Skill Level, Maryland, 2008–2018



A Middle-Skill Gap

Middle-skill jobs account for 44 percent of Maryland's labor market, but only 38 percent of the state's workers are currently trained to the middle-skill level.

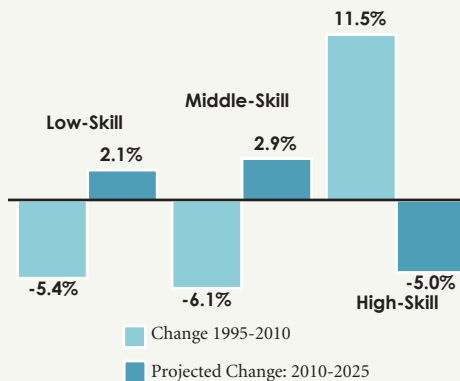
Jobs and Workers by Skill Level, Maryland, 2009



Middle-Skill Gap Will Persist

Educational projections for Maryland suggest that the state is likely to face a continued shortage of middle-skill workers in the future. During the fifteen years between 1995 and 2010, the state saw an increase in residents with educational attainment at the middle- and high-skill level, while the number of residents with low-skill education levels decreased. The state's projected education trends for the subsequent fifteen years indicate that there will be a decrease in middle-skill educational attainment, suggesting that middle-skill worker shortages will continue.

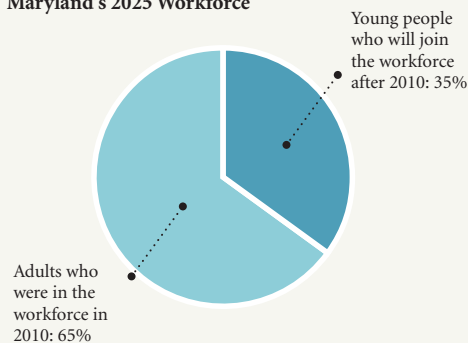
Percentage Change in Educational Attainment, Maryland, 1995–2025



The Workforce of Tomorrow is in the Workforce Today

Maryland cannot address its middle-skill challenges by focusing its education and training resources solely on the next generation of workers coming out of high school. Nearly two-thirds of the people who will be in the state's workforce in the year 2025 were already working adults in 2010—long past the traditional high school-to-college pipeline.

Maryland's 2025 Workforce

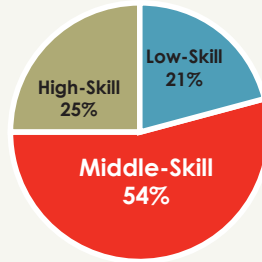


MISSISSIPPI

Jobs: Demand for Middle-Skill Jobs is Strong

Over 50 percent of all jobs in 2009 were middle-skill jobs.

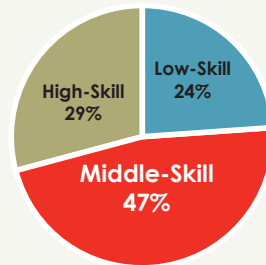
Jobs by Skill Level, Mississippi, 2009



Job Openings: Demand for Middle-Skill Jobs Will Remain Strong

In the decade between 2008 and 2018, 47 percent of all job openings will be middle-skill.

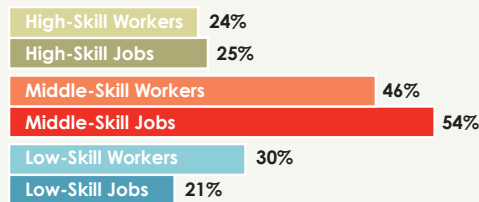
Job Openings by Skill Level, Mississippi, 2008–2018



A Middle-Skill Gap

Middle-skill jobs account for 54 percent of Mississippi's labor market, but only 46 percent of the state's workers are currently trained to the middle-skill level.

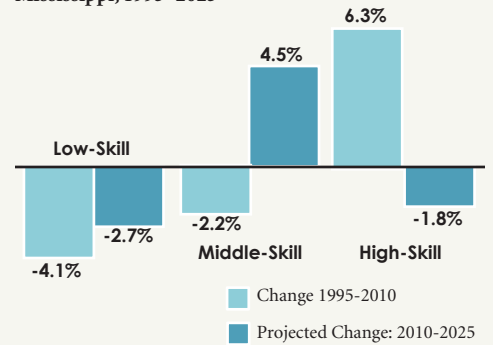
Jobs and Workers by Skill Level, Mississippi, 2009



Middle-Skill Gap Will Persist

Educational projections for Mississippi suggest that the state is likely to face a continued shortage of middle-skill workers in the future. During the fifteen years between 1995 and 2010, the state saw an increase in residents with educational attainment at the high-skill level, while the number of residents with middle- and low-skill education levels decreased. The state's projected education trends for the subsequent fifteen years suggest that while there will be a slight uptick in middle-skill educational attainment, middle-skill worker shortages will continue.

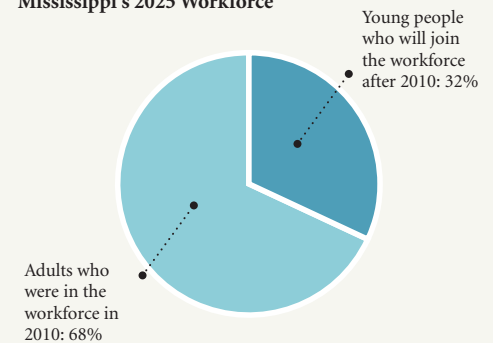
Percentage Change in Educational Attainment, Mississippi, 1995–2025



The Workforce of Tomorrow is in the Workforce Today

Mississippi cannot address its middle-skill challenges by focusing its education and training resources solely on the next generation of workers coming out of high school. Over two-thirds of the people who will be in the state's workforce in the year 2025 were already working adults in 2010—long past the traditional high school-to-college pipeline.

Mississippi's 2025 Workforce

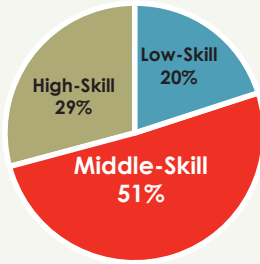


MISSOURI

Jobs: Demand for Middle-Skill Jobs is Strong

Over 50 percent of all jobs in 2009 were middle-skill jobs.

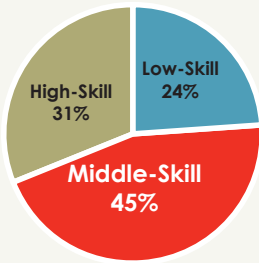
Jobs by Skill Level, Missouri, 2009



Job Openings: Demand for Middle-Skill Jobs Will Remain Strong

In the decade between 2008 and 2018, 45 percent of all job openings will be middle-skill.

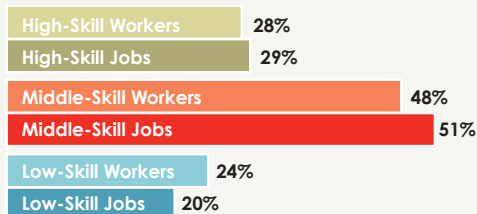
Job Openings by Skill Level, Missouri, 2008–2018



A Middle-Skill Gap

Middle-skill jobs account for 51 percent of Missouri’s labor market, but only 48 percent of the state’s workers are currently trained to the middle-skill level.

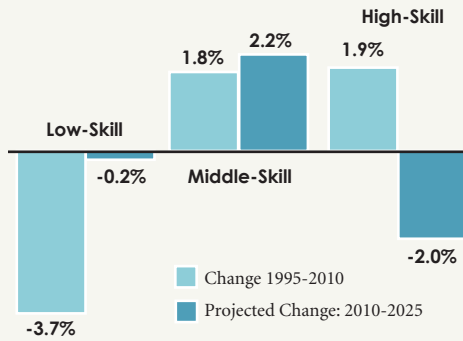
Jobs and Workers by Skill Level, Missouri, 2009



Middle-Skill Gap Will Persist

Educational projections for Missouri suggest that the state is likely to face a continued shortage of middle-skill workers in the future. During the fifteen years between 1995 and 2010, the state saw an increase in residents with educational attainment at the middle- and high-skill level, while the number of residents with low-skill education levels decreased. The state’s projected education trends for the subsequent fifteen years suggest that while there will be a very slight uptick in middle-skill educational attainment, middle-skill worker shortages will continue.

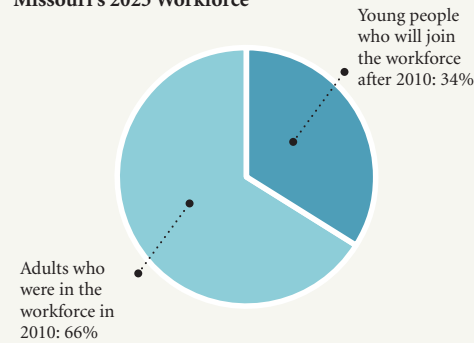
Percentage Change in Educational Attainment, Missouri, 1995–2025



The Workforce of Tomorrow is in the Workforce Today

Missouri cannot address its middle-skill challenges by focusing its education and training resources solely on the next generation of workers coming out of high school. Two-thirds of the people who will be in the state’s workforce in the year 2025 were already working adults in 2010—long past the traditional high school-to-college pipeline.

Missouri’s 2025 Workforce

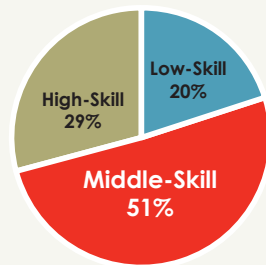


NORTH CAROLINA

Jobs: Demand for Middle-Skill Jobs is Strong

Over half of all jobs in 2009 were middle-skill jobs.

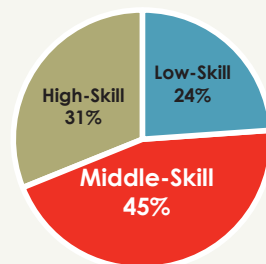
Jobs by Skill Level, North Carolina, 2009



Job Openings: Demand for Middle-Skill Jobs Will Remain Strong

In the decade between 2008 and 2018, 45 percent of all job openings will be middle-skill.

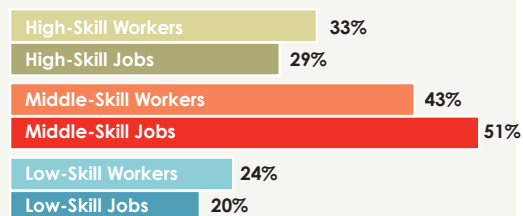
Job Openings by Skill Level, North Carolina, 2008–2018



A Middle-Skill Gap

Middle-skill jobs account for 51 percent of North Carolina's labor market, but only 43 percent of the state's workers are currently trained to the middle-skill level.

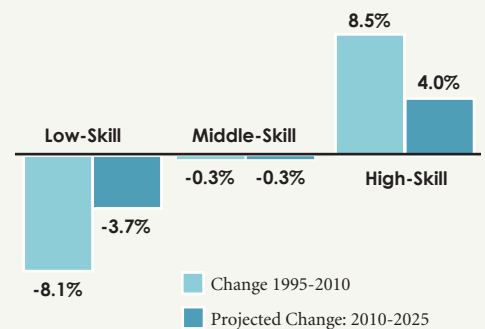
Jobs and Workers by Skill Level, North Carolina, 2009



Middle-Skill Gap Will Persist

Educational projections for North Carolina suggest that the state is likely to face a continued shortage of middle-skill workers in the future. During the fifteen years between 1995 and 2010, the state saw an increase in residents with educational attainment at the high-skill level, while the number of residents with middle- and low-skill education levels decreased. The state's projected education trends for the subsequent fifteen years indicate that there will be a very slight decrease in middle-skill educational attainment, suggesting that middle-skill worker shortages will continue.

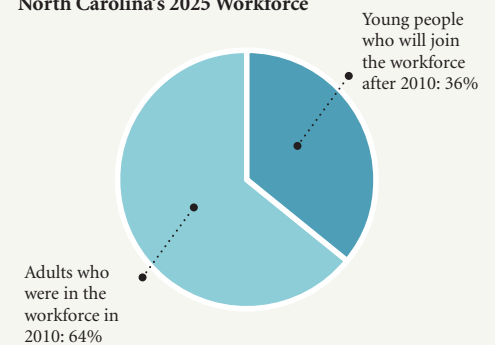
Percentage Change in Educational Attainment, North Carolina, 1995–2025



The Workforce of Tomorrow is in the Workforce Today

North Carolina cannot address its middle-skill challenges by focusing its education and training resources solely on the next generation of workers coming out of high school. Nearly two-thirds of the people who will be in the state's workforce in the year 2025 were already working adults in 2010—long past the traditional high school-to-college pipeline.

North Carolina's 2025 Workforce

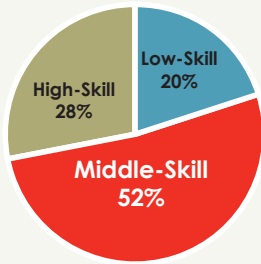


OKLAHOMA

Jobs: Demand for Middle-Skill Jobs is Strong

Over 50 percent of all jobs in 2009 were middle-skill jobs.

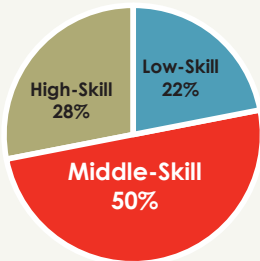
Jobs by Skill Level, Oklahoma, 2009



Job Openings: Demand for Middle-Skill Jobs Will Remain Strong

In the decade between 2008 and 2018, 50 percent of all job openings will be middle-skill.

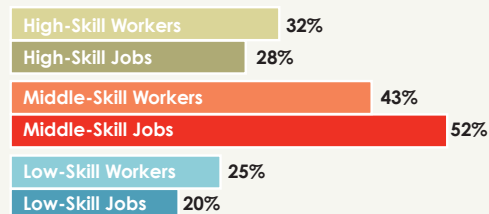
Job Openings by Skill Level, Oklahoma, 2008–2018



A Middle-Skill Gap

Middle-skill jobs account for 52 percent of Oklahoma's labor market, but only 43 percent of the state's workers are currently trained to the middle-skill level.

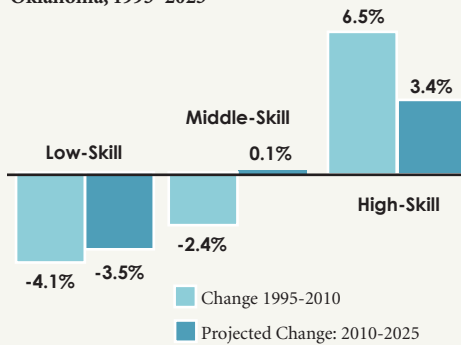
Jobs and Workers by Skill Level, Oklahoma, 2009



Middle-Skill Gap Will Persist

Educational projections for Oklahoma suggest that the state is likely to face a continued shortage of middle-skill workers in the future. During the fifteen years between 1995 and 2010, the state saw an increase in residents with educational attainment at the high-skill level, while the number of residents with middle- and low-skill education levels decreased. The state's projected education trends for the subsequent fifteen years suggest that while there will be a very slight uptick in middle-skill educational attainment, middle-skill worker shortages will continue.

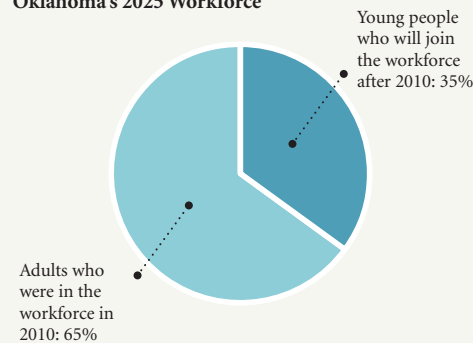
Percentage Change in Educational Attainment, Oklahoma, 1995–2025



The Workforce of Tomorrow is in the Workforce Today

Oklahoma cannot address its middle-skill challenges by focusing its education and training resources solely on the next generation of workers coming out of high school. Nearly two-thirds of the people who will be in the state's workforce in the year 2025 were already working adults in 2010—long past the traditional high school-to-college pipeline.

Oklahoma's 2025 Workforce

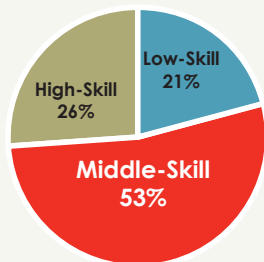


PUERTO RICO

Jobs: Demand for Middle-Skill Jobs is Strong

Over 50 percent of all jobs in 2009 were middle-skill jobs.

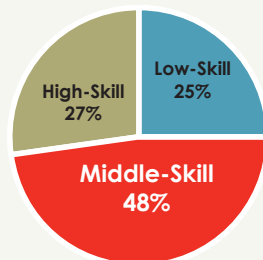
Jobs by Skill Level, Puerto Rico, 2009



Job Openings: Demand for Middle-Skill Jobs Will Remain Strong

In the decade between 2008 and 2018, 48 percent of all job openings will be middle-skill.

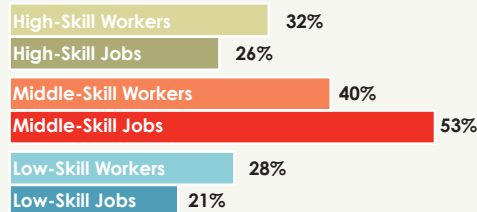
Job Openings by Skill Level, Puerto Rico, 2008–2018



A Middle-Skill Gap

Middle-skill jobs account for 53 percent of Puerto Rico’s labor market, but only 40 percent of the state’s workers are currently trained to the middle-skill level.

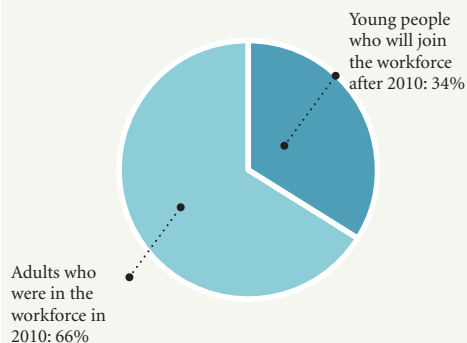
Jobs and Workers by Skill Level, Puerto Rico, 2009



Middle-Skill Gap Will Persist

Puerto Rico cannot address its middle-skill challenges by focusing its education and training resources solely on the next generation of workers coming out of high school. Two-thirds of the people who will be in the state’s workforce in the year 2025 were already working adults in 2010—long past the traditional high school-to-college pipeline.

The Workforce of Tomorrow is in the Workforce Today: Puerto Rico’s 2025 Workforce

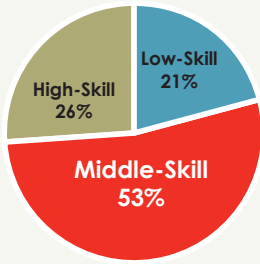


SOUTH CAROLINA

Jobs: Demand for Middle-Skill Jobs is Strong

Over 50 percent of all jobs in 2009 were middle-skill jobs.

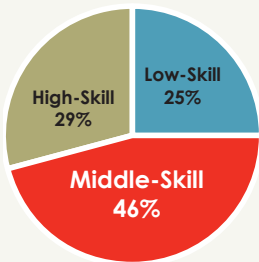
Jobs by Skill Level, South Carolina, 2009



Job Openings: Demand for Middle-Skill Jobs Will Remain Strong

In the decade between 2008 and 2018, 46 percent of all job openings will be middle-skill.

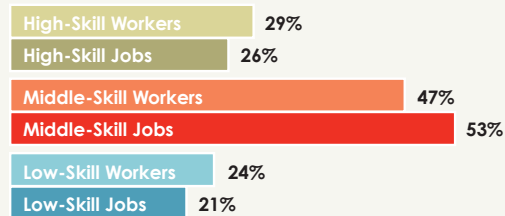
Job Openings by Skill Level, South Carolina, 2008–2018



A Middle-Skill Gap

Middle-skill jobs account for 53 percent of South Carolina’s labor market, but only 47 percent of the state’s workers are currently trained to the middle-skill level.

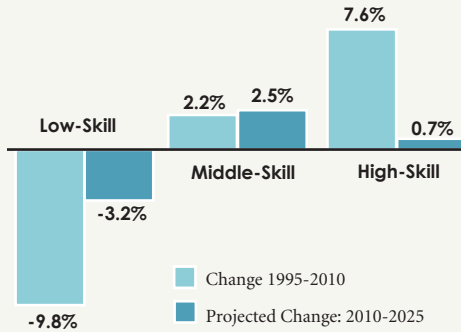
Jobs and Workers by Skill Level, South Carolina, 2009



Middle-Skill Gap Will Persist

Educational projections for South Carolina suggest that the state is likely to face a continued shortage of middle-skill workers in the future. During the fifteen years between 1995 and 2010, the state saw an increase in residents with educational attainment at the middle- and high-skill level, while the number of residents with low-skill education levels decreased. The state’s projected education trends for the subsequent fifteen years suggest that while there will be a slight uptick in middle-skill educational attainment, middle-skill worker shortages will continue.

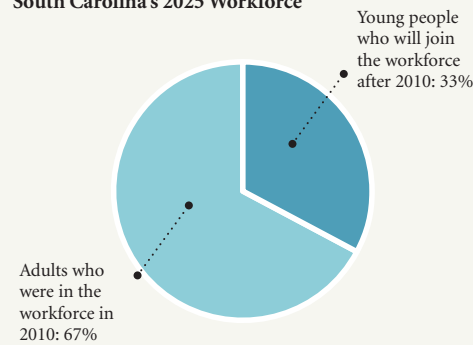
Percentage Change in Educational Attainment, South Carolina, 1995–2025



The Workforce of Tomorrow is in the Workforce Today

South Carolina cannot address its middle-skill challenges by focusing its education and training resources solely on the next generation of workers coming out of high school. Two-thirds of the people who will be in the state’s workforce in the year 2025 were already working adults in 2010—long past the traditional high school-to-college pipeline.

South Carolina’s 2025 Workforce

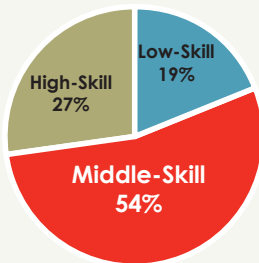


TENNESSEE

Jobs: Demand for Middle-Skill Jobs is Strong

Over 50 percent of all jobs in 2009 were middle-skill jobs.

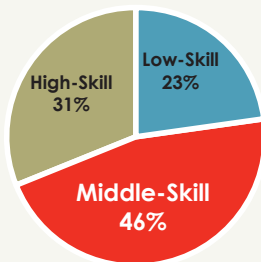
Jobs by Skill Level, Tennessee, 2009



Job Openings: Demand for Middle-Skill Jobs Will Remain Strong

In the decade between 2008 and 2018, 46 percent of all job openings will be middle-skill.

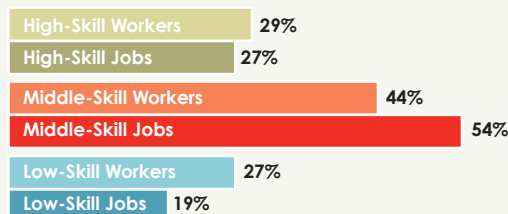
Job Openings by Skill Level, Tennessee, 2008–2018



A Middle-Skill Gap

Middle-skill jobs account for 54 percent of Tennessee’s labor market, but only 44 percent of the state’s workers are currently trained to the middle-skill level.

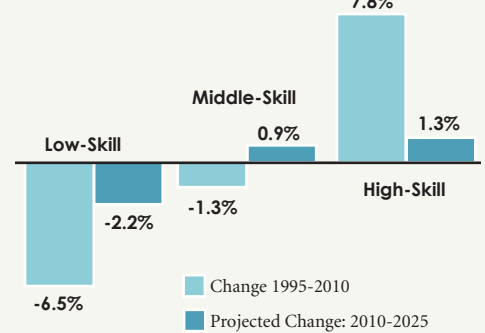
Jobs and Workers by Skill Level, Tennessee, 2009



Middle-Skill Gap Will Persist

Educational projections for Tennessee suggest that the state is likely to face a continued shortage of middle-skill workers in the future. During the fifteen years between 1995 and 2010, the state saw an increase in residents with educational attainment at the high-skill level, while the number of residents with middle- and low-skill education levels decreased. The state’s projected education trends for the subsequent fifteen years suggest that while there will be a very slight uptick in middle-skill educational attainment, middle-skill worker shortages will continue.

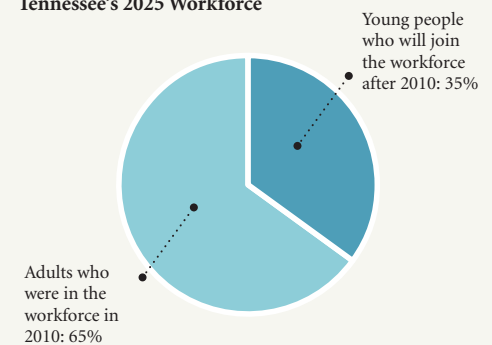
Percentage Change in Educational Attainment, Tennessee, 1995–2025



The Workforce of Tomorrow is in the Workforce Today

Tennessee cannot address its middle-skill challenges by focusing its education and training resources solely on the next generation of workers coming out of high school. Nearly two-thirds of the people who will be in the state’s workforce in the year 2025 were already working adults in 2010—long past the traditional high school-to-college pipeline.

Tennessee’s 2025 Workforce

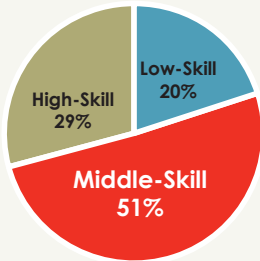


TEXAS

Jobs: Demand for Middle-Skill Jobs is Strong

Over 50 percent of all jobs in 2009 were middle-skill jobs.

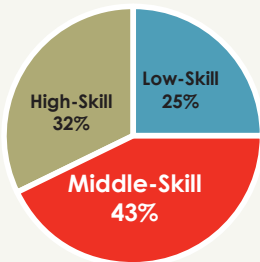
Jobs by Skill Level, Texas, 2009



Job Openings: Demand for Middle-Skill Jobs Will Remain Strong

In the decade between 2008 and 2018, 43 percent of all job openings will be middle-skill.

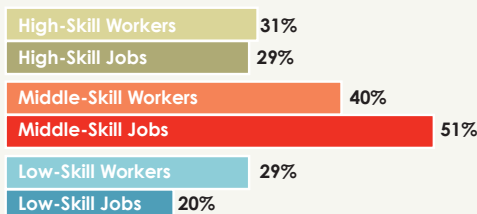
Job Openings by Skill Level, Texas, 2008–2018



A Middle-Skill Gap

Middle-skill jobs account for 51 percent of Texas' labor market, but only 40 percent of the state's workers are currently trained to the middle-skill level.

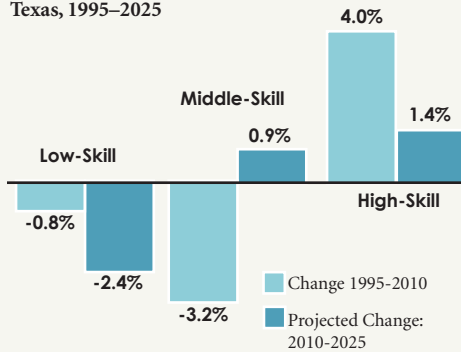
Jobs and Workers by Skill Level, Texas, 2009



Middle-Skill Gap Will Persist

Educational projections for Texas suggest that the state is likely to face a continued shortage of middle-skill workers in the future. During the fifteen years between 1995 and 2010, the state saw an increase in residents with educational attainment at the high-skill level, while the number of residents with middle- and low-skill education levels decreased. The state's projected education trends for the subsequent fifteen years suggest that while there will be a very slight uptick in middle-skill educational attainment, middle-skill worker shortages will continue.

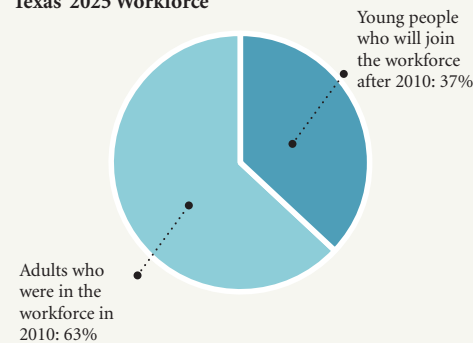
Percentage Change in Educational Attainment, Texas, 1995–2025



The Workforce of Tomorrow is in the Workforce Today

Texas cannot address its middle-skill challenges by focusing its education and training resources solely on the next generation of workers coming out of high school. Nearly two-thirds of the people who will be in the state's workforce in the year 2025 were already working adults in 2010—long past the traditional high school-to-college pipeline.

Texas' 2025 Workforce

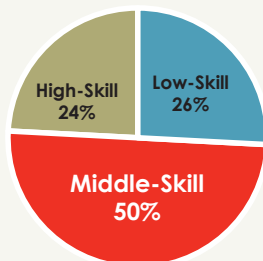


U.S. VIRGIN ISLANDS

Jobs: Demand for Middle-Skill Jobs is Strong

Half of all jobs in 2009 were middle-skill jobs.

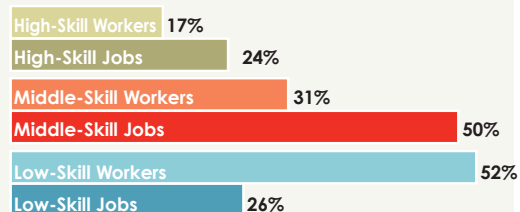
Jobs by Skill Level, U.S. Virgin Islands, 2009



A Middle-Skill Gap

Middle-skill jobs account for 50 percent of U.S. Virgin Islands' labor market, but only 31 percent of the state's workers are currently trained to the middle-skill level.

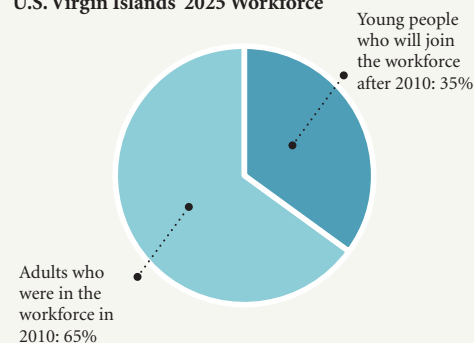
Jobs and Workers by Skill Level, U.S. Virgin Islands, 2009



The Workforce of Tomorrow is in the Workforce Today

The U.S. Virgin Islands cannot address their middle-skill challenges by focusing its education and training resources solely on the next generation of workers coming out of high school. Nearly two-thirds of the people who will be in the state's workforce in the year 2025 were already working adults in 2010—long past the traditional high school-to-college pipeline.

U.S. Virgin Islands' 2025 Workforce

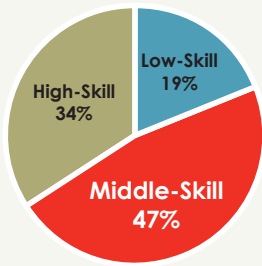


VIRGINIA

Jobs: Demand for Middle-Skill Jobs is Strong

Nearly half of all jobs in 2009 were middle-skill jobs.

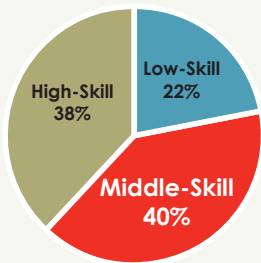
Jobs by Skill Level, Virginia, 2009



Job Openings: Demand for Middle-Skill Jobs Will Remain Strong

In the decade between 2008 and 2018, 40 percent of all job openings will be middle-skill.

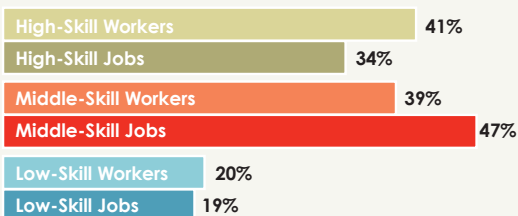
Job Openings by Skill Level, Virginia, 2008–2018



A Middle-Skill Gap

Middle-skill jobs account for 47 percent of Virginia’s labor market, but only 39 percent of the state’s workers are currently trained to the middle-skill level.

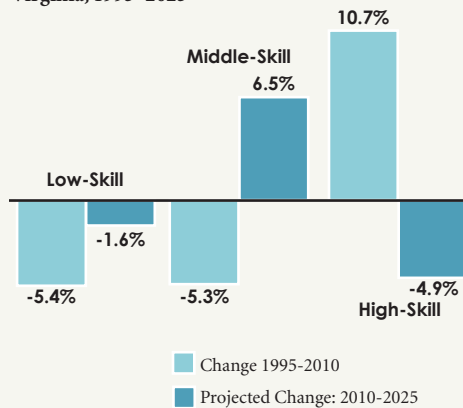
Jobs and Workers by Skill Level, Virginia, 2009



Middle-Skill Gap Will Persist

Educational projections for Virginia suggest that the state is likely to face a continued shortage of middle-skill workers in the future. During the fifteen years between 1995 and 2010, the state saw an increase in residents with educational attainment at the high-skill level, while the number of residents with middle- and low-skill education levels decreased. The state’s projected education trends for the subsequent fifteen years suggest that while there will be a small uptick in middle-skill educational attainment, middle-skill worker shortages will continue.

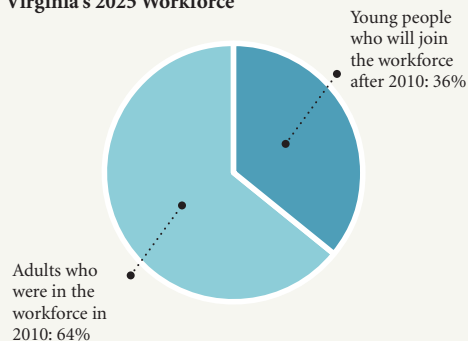
Percentage Change in Educational Attainment, Virginia, 1995–2025



The Workforce of Tomorrow is in the Workforce Today

Virginia cannot address its middle-skill challenges by focusing its education and training resources solely on the next generation of workers coming out of high school. Nearly two-thirds of the people who will be in the state’s workforce in the year 2025 were already working adults in 2010—long past the traditional high school-to-college pipeline.

Virginia’s 2025 Workforce

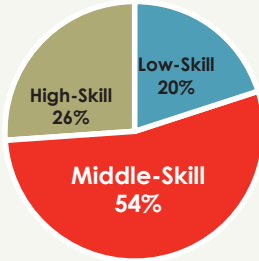


WEST VIRGINIA

Jobs: Demand for Middle-Skill Jobs is Strong

Over 50 percent of all jobs in 2009 were middle-skill jobs.

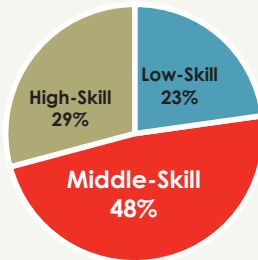
Jobs by Skill Level, West Virginia, 2009



Job Openings: Demand for Middle-Skill Jobs Will Remain Strong

In the decade between 2008 and 2018, 48 percent of all job openings will be middle-skill.

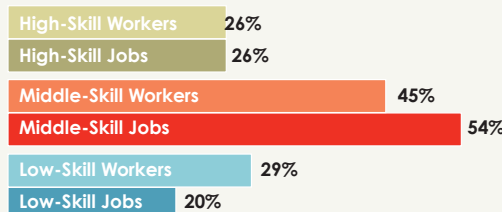
Job Openings by Skill Level, West Virginia, 2008–2018



A Middle-Skill Gap

Middle-skill jobs account for 54 percent of West Virginia’s labor market, but only 45 percent of the state’s workers are currently trained to the middle-skill level.

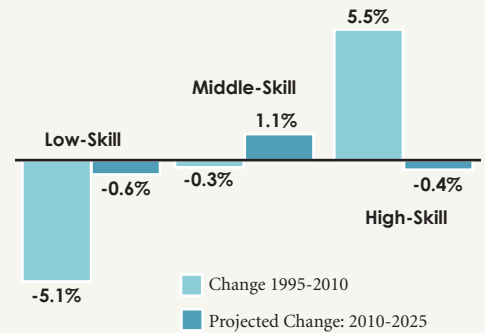
Jobs and Workers by Skill Level, West Virginia, 2009



Middle-Skill Gap Will Persist

Educational projections for West Virginia suggest that the state is likely to face a continued shortage of middle-skill workers in the future. During the fifteen years between 1995 and 2010, the state saw an increase in residents with educational attainment at the high-skill level, while the number of residents with middle- and low-skill education levels decreased. The state’s projected education trends for the subsequent fifteen years suggest that while there will be a very slight uptick in middle-skill educational attainment, middle-skill worker shortages will continue.

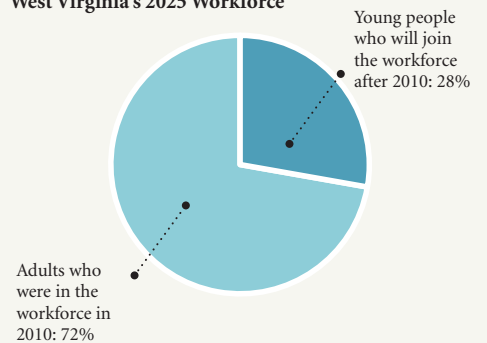
Percentage Change in Educational Attainment, West Virginia, 1995–2025



The Workforce of Tomorrow is in the Workforce Today

West Virginia cannot address its middle-skill challenges by focusing its education and training resources solely on the next generation of workers coming out of high school. Well over two-thirds of the people who will be in the state’s workforce in the year 2025 were already working adults in 2010—long past the traditional high school-to-college pipeline.

West Virginia’s 2025 Workforce



- 1 *Manufacturing Talent for the Human Age*, Manpower Group (Milwaukee, WI, 2011). Available at <http://www.experis.us/Client-File-Pile/Site-Documents/ManufacturingTalent.pdf>.
- 2 Narayana Kocherlakota, president of the Minneapolis Federal Reserve Bank, noted in September 2010 that if the skills gap were to be closed, national equilibrium unemployment could drop to as low as 6.5 percent from 9.6 percent (the national rate at the time of his speech). Speech available at http://www.minneapolisfed.org/news_events/pres/speech_display.cfm?id=4532. An International Monetary Fund study found that skills mismatches “account for around 50 basis points of the increase in the national equilibrium unemployment rate since the end of 2007.” (50 basis points equals .5 percent.) Nicoletta Batini, Oya Celasun, Thomas Dowling, Marcello Estevão, Geoffrey Keim, Martin Sommer, and Evridiki Tsounta, *IMF Country Report No. 10/248*, (Washington, DC, July 2010).
- 3 Unemployment data compiled by National Skills Coalition represents states and protectorates in the Southern Governors’ Association: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, Oklahoma, Puerto Rico, South Carolina, Tennessee, Texas, U.S. Virgin Islands, Virginia, and West Virginia. All data obtained from U.S. Department of Labor Bureau of Labor Statistics website with the exception of U.S. Virgin Islands data which was obtained from U.S. Virgin Islands Department of Labor website. The southern region represented in this analysis of unemployment differs from the Southern Region as defined by the Bureau of Labor Statistics which includes Texas, Oklahoma, Arkansas, Louisiana, Kentucky, Tennessee, Mississippi, Alabama, Georgia, Florida, North Carolina, South Carolina, West Virginia, Virginia, Maryland, Delaware, and Washington, D.C. Unemployment for the Southern United States region as defined by BLS fell below 9 percent in April 2011 for the first time since June 2009 <http://www.bls.gov/eag/eag.south.htm>.
- 4 G. Scott Thomas, “South is top region for small businesses,” *The Business Journals*, April 13, 2011. Available at <http://www.bizjournals.com/bizjournals/on-numbers/scott-thomas/2011/04/south-is-topregion-for-small-businesses.html>.
- 5 JP Donlon, “Best/Worst States for Business,” *Chief Executive Magazine*, May 3, 2011. In the survey, 500 CEOs considered a wide range of criteria, including workforce quality and the American South boasted three of the five states showing the biggest gains since 2010 and four of the five states showing the biggest five-year gains. Three southern states appear in the top ten states for workforce quality, with Texas topping the list. Article, charts, interactive map and methodology available at <http://chiefexecutive.net/best-worst-states-for-business>.
- 6 Robert D. Atkinson and Scott Ande, *The 2010 State New Economy Index*, The Information Technology and Innovation Foundation and the Ewing Marion Kauffman Foundation (Washington, DC, 2010). Available at <http://www.itif.org/files/2010-state-new-economy-index.pdf>.
- 7 Joel Kotkin, “The U.S.’ Biggest Brain Magnets,” *Forbes.com*, February 10, 2011. Available at <http://www.forbes.com/2011/02/10/smart-cities-new-orleans-austin-contributors-joel-kotkin.html>.
- 8 Harry Holzer and Robert Lerman, *America’s Forgotten Middle-Skill Jobs: Education and Training Requirements in the Next Decade and Beyond*, National Skills Coalition (formerly The Workforce Alliance) (Washington, DC, 2007). Available at http://www.nationalskillscoalition.org/assets/reports-/americasforgottenmiddleskilljobs_2007-11.pdf. While middle-skill jobs have declined slightly as a portion of total employment nationwide, roughly half of all employment today is in middle-skill occupations. And nearly half (about 45 percent) of all job openings between 2004 and 2014 will be at the middle-skill level. This compares with one-third of job openings in high-skill occupational categories and 22 percent in occupations requiring no more than a high school degree.

- 9 Bureau of Labor Statistics, *May 2010 State Occupational Employment and Wage Estimates*. NSC calculation of annual average wage for American South region comprised of states and protectorates within the SGA.
- 10 Holzer and Lerman, 2007. Between 1997 and 2005, American workers on the whole saw an overall real wage increase of just 5 percent (adjusting for inflation). At the same time, many middle-skill occupations saw significantly higher wage increases.
- 11 Occupational employment projections from Bureau of Labor Statistics. Jobs requiring at least moderate term on-the-job training, related work experience, a postsecondary vocational award, or an associate's degree were considered middle-skill.
- 12 State and protectorate occupational employment data from the Bureau of Labor Statistics. Bureau of Labor Statistics, *May 2009 State Occupational Employment and Wage Estimates* (Washington, DC, 2010). Available at <http://data.bls.gov:8080/oes/search.jsp>. Occupational categories (high, middle, low skill) based on the methodology used in Holzer and Lerman, 2007, p.9.
- 13 Includes all states and protectorates within the Southern Governors' Association with the exception of U.S. Virgin Islands—projections data for U.S. Virgin Islands not available.
- 14 Based on occupational projections for 2008-2018 by state labor market divisions using a recategorization of occupations according to Bureau of Labor Statistics Education and Training Categories. Occupational projections were not available for the U.S. Virgin Islands (USVI), therefore regional data does not include USVI. Jobs requiring at least moderate-term on-the-job training, related work experience, a postsecondary vocational award, or an associate's degree were classified as middle-skill. In states where 2008-2018 data was not yet available online from state labor market division, data was obtained from <http://projectionscentral.com/>.
- 15 State and protectorate occupational employment data from the Bureau of Labor Statistics. Bureau of Labor Statistics, *May 2009 State Occupational Employment and Wage Estimates* (Washington, DC, 2010). Available at <http://data.bls.gov:8080/oes/search.jsp>. Occupational categories (high, middle, low) based on the methodology used in Holzer and Lerman, 2007, p. 9. Worker educational attainment data from the June 2009 Current Population Survey for all states, the 2009 Puerto Rico American Community Survey for Puerto Rico, and the 2000 Census for the U.S. Virgin Islands. Only workers in the labor market and at least 25 years of age (past traditional school age) are counted for States and Puerto Rico. The U.S. Virgin Islands data contains information on all residents between ages 25 and 64.
- 16 Based on Current Population Survey (CPS) data for June 1995 and 2010 along with population projection data by RAND California Statistics and labor force estimates by the Bureau of Labor Statistics. Data necessary to calculate the projections were not available for the Puerto Rico and the U.S. Virgin Islands. The regional estimate does not include data from the protectorates for any year. Past years educational attainment data reported only for workers in labor force and aged 25 and over, using CPS data. 2025 projections calculated using static educational attainment model presented in Hanak and Baldassarre, 2005. In that model, educational attainment figures are calculated for the state's current workers (workers aged 25-49 in 2010) for each of 12 different race, ethnicity, gender and age cohorts. Educational attainment for these cohorts is assumed to be static over the ensuing 15 years (2025), and educational attainment for new cohorts of workers (i.e., younger than 25 years in 2010) is assumed to mirror that of similar age-race-gender groups today. As such, changing educational attainment throughout the state's population is calculated based on projected demographic changes in the composition of the working population, and does not take into account possible changes in behavior, immigration, et.al. RAND California Statistics, *Population Projections for U.S. States*. Available at <http://ca.rand.org/stats/popdemo/popprojUS.html>. Ellen Hanak and Mark Baldassarre, *California 2025: Taking on the Future*, Public Policy Institute of California (San Francisco, CA, 2005), pp. 44-45.

- 17 For the states, data from long-term population projections (2010 to 2025) by age cohorts, as calculated by RAND California Statistics were used. For Puerto Rico and the U.S. Virgin Islands data from longterm population projections (2010 to 2025) as calculated by the World Bank Health, Nutrition, and Population program <http://data.worldbank.org/data-catalog/health-nutrition-population-statistics>. Each cohort was either classified as a “current working age adult” or “not a current working age adult” based on age. Current working age was defined as ages 20 to 64.
- 18 National Science Foundation’s Advanced Technological Education Centers’ website, www.atecenters.org.
- 19 U.S. Department of Labor, *Notice of Availability of Funds and Solicitation for Grant Applications for the Science, Technology, Engineering, and Mathematics (STEM) Opportunities in the Workforce System Initiative*, Catalog of Federal Assistance Number: 17.268 (Washington, DC, 2009).
- 20 *People and Profitability—A Time for Change: A 2009 people management practices survey of the manufacturing industry*, Deloitte Development LLC, The Manufacturing Institute, Oracle [Inc.] (Washington, DC, 2009). Available at http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/us_pip_peoplemanagementreport_100509.pdf.
- 21 Robert J. Visdos, *State of the Welding Industry Report: Executive Summary*, National Center for Welding Education and Training (Elyria, OH, 2010). Available at www.weld-ed.org/NR/rdonlyres/363B5036-3FB6-4631-B0DE-30B91EB82B88/0/welded_excutive_summ.pdf.
- 22 Sarah White and Jason Walsh, *Greener Pathways: Jobs and Workforce Development in the Clean Energy Economy*, Center on Wisconsin Strategy, National Skills Coalition (formerly The Workforce Alliance) and The Apollo Alliance (Madison, WI, 2008).
- 23 Tabulated by National Skills Coalition using data from the Bureau of Labor Statistics website.
- 24 Randy Caps, Michael Fix, and Serena Yi-Ling, *Still an Hourglass? Immigrant Workers in Middle-Skill Jobs*, Migration Policy Institute (Washington, DC, 2010).
- 25 Bureau of Labor Statistics, *Occupational Outlook Handbook, 2010-11*.
- 26 *State of the North Carolina Workforce 2011-20: Preparing North Carolina’s Workforce and Businesses for the Global Economy*, The North Carolina Commission on Workforce Development (Raleigh, NC, 2011).

ABOUT NATIONAL SKILLS COALITION

National Skills Coalition is a non-partisan, broad-based coalition of employers, unions, education and training providers, and public officials working toward a vision of an America that grows its economy by investing in its people so that every worker and every industry has the skills to compete and prosper. We engage in organizing, advocacy, and communications to advance state and federal policies that support these goals—policies that are based on the on-the-ground expertise of our members.

National Skills Coalition was founded in 1998 as The Workforce Alliance in response to a series of federal policies that signaled the end of national investments in the skills of America's workers at a time when skill gaps were growing in key U.S. industries. Since then, we've demonstrated that investments in skills work. We've shown that diverse stakeholders can find agreement around specific reforms that will improve a variety of workforce education and training policies. And we have documented that the American public is strongly supportive of a deeper investment in the skills of America's workers. We continue to mobilize support for a new national skills agenda that cuts across public policies, and simultaneously serves a wide range of U.S. workers and industries.

National Skills Coalition is governed by a Board of Directors and advised by a national Leadership Council drawn from the ranks of business, labor, community colleges, community-based organizations, and the public workforce system.

More than 5,400 members, representing more than 1,400 organizations in over 30 states, comprise the broad-based membership of National Skills Coalition.

Learn more at www.nationalskillscoalition.org.

ABOUT SOUTHERN GOVERNORS' ASSOCIATION

Founded in 1934, Southern Governors' Association (SGA) is the oldest and historically the largest of the regional governors' associations. Since its inception, SGA has represented the common interests of Southern states' chief executives and provided a vehicle for promoting them. SGA supports the work of Southern Governors by providing a bipartisan, regional forum to help shape and implement national policy and solve regional problems.

In recent years, the South has become the dominant region in the country—a region characterized by innovation, growth and opportunity. Southern Governors are at the forefront of key changes in the region, and through SGA, these leaders have a unique opportunity to exchange ideas, explore common issues, address pressing problems, coordinate regional collaborative initiatives and promote regional accomplishments.

The association's membership is composed of the Governors of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, Oklahoma, Puerto Rico, South Carolina, Tennessee, Texas, U.S. Virgin Islands, Virginia and West Virginia.

Learn more at www.southerngovernors.org.



NATIONAL SKILLS COALITION
Every worker. Every industry. A strong economy.

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1730 Rhode Island Avenue NW
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