

North Carolina's Southeast Competitive Positioning 2020

Business Sector Target Analysis
Workforce Analysis

NORTH CAROLINA'S
 **SOUTHEAST**TM
Our Region. Your Future.

Executive Summary

To continue to be successful, North Carolina's Southeast is engaged in a process of continuous improvement. This report provides the region with actionable intelligence that will anticipate future business opportunities and lead to more marketing success. Throughout the report national best-practice examples provide ideas that can be used in the region.

We came into 2020 facing trends like urbanization, slowing globalization, and disruptive technological transformation. The Covid-19 pandemic has accelerated many trends and created new opportunities for industry reshoring and talent relocation. The future of value-added agriculture, the defense sector, health care, foreign direct investment, and outdoor recreation is in transition and will have a profound impact on the region's economy.

Workforce skills and availability remains the top competitive issue. Successful places balance the demand for a growing, skilled workforce with abundant education and training resources. The Southeast's school systems and higher education institutions have responded to the challenge with a broad range of opportunities, but more must be done. Population growth is mixed across the 18 counties with projections showing the trends will continue. More focus on specific occupation training, better information to encourage increased interest in skilled trades and a talent attraction effort are needed to better meet employer needs.

The Targeted Industry analysis recommends that the region target Advanced Textiles with a focus on health and safety, Value-Added Agriculture and Food Processing, Medical Technology with a focus on medical devices, Distribution and Logistics, and Production Technology and Heavy Machinery. Construction and building products are also expected to grow. There will be opportunities in the broader Technology sector for the Wilmington subregion, especially in Life Science, opportunities in Plastics in the Wayne, Lenoir, and Craven counties subregion, and manufacturing and research in the Golf sector for Moore County.

Successful marketing requires a good product. The Southeast has many assets but must continuously make improvements to successfully compete. Best Practice research to strengthen rural competitiveness recommends six areas of focus:

- Expand, support & champion innovation for legacy industries and entrepreneurs
- Continue to aggressively expand rural broadband
- Prioritize population growth, talent retention and attraction
- Strengthen rural health care
- Develop new housing strategies and financing for small towns
- Support rural leaders and incent regional cooperation

North Carolina's Southeast's mission is to provide strong economic development leadership through innovative marketing and collaborative regional initiatives that will support the creation of new jobs, generate capital investment, and secure new business locations.

Table of Contents

Introduction	4
Future Trends Analysis.....	5
Anticipating the Post-Pandemic New Reality	5
Future Focus on Southeast Priorities	7
Value Added Agriculture and the Fourth Agriculture Revolution	8
Military and Defense Spending	13
Outdoor Recreation	16
Healthcare Operations.....	17
Foreign Direct Investment and Exports	18
Exports	19
Other Post-Pandemic Trends Impacting North Carolina’s Southeast.....	20
North Carolina’s Southeast Workforce Analysis	21
Workforce Data	22
Regional Population.....	22
Regional Labor Force	23
North Carolina’s Southeast Population Educational Attainment.....	24
Southeast Jobs 2019	29
NC’s Southeast Region – Non-Government Jobs by Sector 2006-2030.....	29
Largest Industries Compared to National Averages	30
Occupations.....	33
Skills in Demand.....	41
Building a Regional Supply of Workers to Meet Demand	43
Current Southeast Education and Training Resources	44
Higher Education	47
Top Certificates and Degree Subjects 2019	48
Workforce Development Boards.....	49
ACT WorkKeys	51
Stakeholder Workforce Development Input.....	51
National Best Practices in Workforce Development	53
North Carolina’s Southeast Marketing Target Analysis.....	60
Sector Concentration and Employment Growth Mapping	63
Example Chart for Industry Mapping.....	64

Sub-Regional Analysis..... 74

 Industry Opportunities..... 76

NC’s Southeast Current Targets 77

Matching Strengths to Industry Needs..... 83

 North Carolina’s Southeast Supply Chain Analysis 84

Supply Chain Value by Sector..... 86

Conclusions and Recommendations 92

 Top Industry Groupings Descriptions 94

Regional Data Comparisons 98

Best Practices Examples to Strengthen Competitiveness in North Carolina’s Southeast Rural Places - Six Focus Areas..... 101

Final Thoughts..... 115

Appendix 1: Workforce Analysis 116

Appendix 2: Regional Education and Training Programs..... 135

Appendix 3: Target Marketing 174

Citations for Best Practices 209

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Introduction

Competition for new jobs, residents and investment has never been fiercer. North Carolina’s Southeast is a regional public-private partnership that markets the state’s 18 county Southeast Region – nationally and globally – to **encourage new economic growth**. Leaders from the public and private sector work together to promote the region and its assets. The organization’s mission is “To provide strong economic development leadership in southeastern North Carolina through innovative marketing and collaborative regional initiatives that will support the creation of new jobs, generate capital investment, and secure new business locations.”

To continue to be successful, the region is engaged in the process of continuous improvement. In late 2019 two North Carolina firms, Economic Leadership and Creative Economic Development Consulting, were hired to provide the region with actionable intelligence that will anticipate future business opportunities and lead to more marketing success. The work included identification of business sectors that offer opportunities for growth, a workforce growth and gap analysis, and a future trend analysis. The project scope also included helping the region to incorporate the findings into the region’s marketing program.

President Dwight D. Eisenhower is credited with the quote, “What is important is seldom urgent and what is urgent is seldom important.” The Eisenhower Matrix was developed to help organizations prioritize what is most important and commit resources to those activities that will yield the greatest results. The research and analysis that follows is provided to help inform



those decisions.

Future Trends Analysis

Anticipating the Post-Pandemic New Reality

This project began prior to the Covid-19 pandemic and the subsequent global recession. In late 2019 the country was almost ten years into the longest continuous private-job expansion on record. All of that changed in March 2020. The lasting impacts that we all expect are now central to any future strategic planning.

Few businesses, or economic development groups entered 2020 with any scenario plans that included a contingency for an unprecedented global pandemic and a deep, medically induced, global recession. We came into the year facing trends like urbanization, slowing globalization, and accelerating technological transformation. Disruption was the watchword, and many of the economic drivers of North Carolina's Southeast were witnessing change. Our national economic and health recovery from the pandemic continues to be slow, challenging, and uncertain, but at some point, we will all be facing the next new normal. Anticipating new opportunities is necessary to help the Southeast improve its competitive position and its economic development success over the next decade.



No one can focus the future picture clearly, but based on the best information currently available, the residue from the pandemic and the subsequent 2021 reset is likely to include many of these emerging trends.

- (1) **Remote everything will be more common.** More people will work remotely, shop remotely, get their health, entertainment, and banking services remotely. We have all endured months of mandatory reprogramming of our personal and professional patterns. Companies have adjusted. Many of these shifts will become permanent. Experts expect market center communities' commercial real estate needs will change. Our home design requirements will change to accommodate work and lifestyle shift. The region's 1.9 million people, and thousands of businesses, will be even more dependent on reliable internet connectivity.

- (2) **Relocations could be more common.** The trend of some Americans moving from high-priced urban centers to more affordable metros has been accelerating over the past decade. Mid-sized city centers prospered following the Great Recession with reimaged suburbia growing over the past five years. The Southeast has communities that have grown rapidly and communities that have seen population loss. News reports this summer have chronicled more movement, pandemic-induced, from density to less dense living options, and from high-priced to affordable. Nobody knows where the new hot spots will be, but they will need high-speed broadband, access to amenities and housing choices. Several areas of the Southeast offer good opportunities and enhanced talent recruitment and placemaking strategies could yield good return-on-investment.



- (3) **Reshoring accelerates.** Covid-19 has shone a bright light on the security and safety advantages of having specific industries and their supply chains within our borders. Over the next few years, we should see growth in biopharmaceutical, medical devices, defense components and food processing. Efficiency will still be important, but redundancy will be a new corporate maxim. As detailed in the Target Market Analysis section of this report there will be significant regional opportunities. Affordability and access to good transportation infrastructure should be key advantages for the region. Building marketing around the supply chains of existing companies, and targeting the industries most likely to reshore, are smart strategies. A good regional supply of ready industrial and warehousing buildings and shovel ready sites will be necessary.
- (4) **Robot utilization will increase.** The Covid-19 shutdown and stay at home orders exposed the vulnerability many businesses had. Manufacturing and construction businesses were already moving toward more robotics due to skill labor shortage. Employment in those industries were also the first to rebound. Expect service industries, currently highly dependent on face-to-face service to substitute robots wherever possible, to reduce their exposure to future, similar, disruptions. Early

research suggests that the impact will disproportionately hurt small businesses and lower wage workers. Agile retraining options for Southeast workers that are being displaced will be a necessity and could be a longer-term competitive advantage.

- (5) **Expect more state competition, data analytics and scenario planning.** Pre-pandemic, many states, including North Carolina, were experiencing economic transformations. Changes in demographics, technology, and consumer behavior continuously disrupt the status quo and confound both business and state economic planning. Businesses' new investment decisions are now mostly driven by sophisticated data analytics that easily allow comparisons between "place" options. The region's web site is the investor window to all the data.

Four competitive categories usually top the list for consideration.

- **Business climate**, including taxes, regulatory practices, and legal environment.
- **Workforce availability and cost**, with the skills in demand, and the ability to attract new residents.
- **Infrastructure** including roads, rail, ports, broadband, air service, affordable and reliable power, and water and sewer.
- **Quality of life** and other amenities that will promote talent attraction.

In a time of mass disruption, the pandemic has acted as an accelerant. Trends we expected are impacting us sooner, with a few unexpected tangents thrown in to upend even the best plans. States and every region recognize that they are in competition for new investments and have begun to develop new ideas for the next new normal.

Mike Tyson is often quoted, "everyone has a plan until they get punched in the mouth." 2020 certainly feels like the proverbial punch. We entered the year concerned about technological unemployment, global trade uneasiness and labor shortages due to full employment. Then we added a pandemic, a recession, and a national election. Another ex-boxer, Ed Latimore, is credited with the quote "The future is coming, whether you're ready or not. The past is gone, whether you're over it or not."

Future Focus on Southeast Priorities

While North Carolina's Southeast's economy will be heavily impacted by most national and international trends, the following sections dive deeper into five areas that have specific impact to the region. Each is experiencing rapid change. Mining the changes for opportunities and advantages should yield better results.

Value Added Agriculture and the Fourth Agriculture Revolution

Like farmers everywhere, North Carolina's 46,000 farms are facing disruption and an uncertain future. Changes in trade policy, regulations, consumer preferences and weather events combine to create ambiguity. Despite the challenges, agriculture remains big business in the Southeast Region. More than 23,500 people are employed in food processing and 11,300 employed in agriculture and farming. The following table, from the 2017 census, shows just how big agriculture is in each of the region's 18 counties.



NORTH CAROLINA'S SOUTHEAST COMPETITIVE POSITIONING 2020

County	Number of Farms	Acres in Farms	Market Value products Sold	Top Crop By Value	Top Livestock By Sales
Anson	412	85,330	\$303,746,000	Grains, oilseed, dry beans & peas	Poultry and Eggs
Bladen	512	180,340	\$446,399,000	Fruits, tree nuts, berries	Hogs and Pigs
Brunswick	231	44,693	\$46,069,000	Grains, oilseed, dry beans & peas	Hogs and Pigs
Columbus	514	141,080	\$162,008,000	Grains, oilseed, dry beans & peas	Hogs and Pigs
Craven	245	81,360	\$71,606,000	Grains, oilseed, dry beans & peas	Hogs and Pigs
Cumberland	336	65,995	\$95,799,000	Grains, oilseed, dry beans & peas	Hogs and Pigs
Duplin	820	243,098	\$1,261,691,000	Grains, oilseed, dry beans & peas	Hogs and Pigs
Hoke	189	53,647	\$76,796,000	Grains, oilseed, dry beans & peas	Hogs and Pigs
Lenoir	386	113,708	\$311,373,000	Grains, oilseed, dry beans & peas	Hogs and Pigs
Montgomery	240	33,521	\$143,304,000	Nursery, greenhouse, floriculture, sod	Poultry and Eggs
Moore	733	89,375	\$150,349,000	Tobacco	Poultry and Eggs
New Hanover	59	879	NA	NA	Horses, ponies, mules, burros, donkeys
Onslow	340	52,473	\$171,574,000	Grains, oilseed, dry beans & peas	Poultry and Eggs
Pender	336	64,484	\$200,303,000	Nursery, greenhouse, floriculture, sod	Hogs and Pigs
Robeson	722	263,740	\$385,759,000	Grains, oilseed, dry beans & peas	Poultry and Eggs
Sampson	960	301,248	\$1,249,140,000	Vegetables, melons, potatoes, sweet potatoes	Hogs and Pigs
Scotland	108	54,853	\$112,158,000	Grains, oilseed, dry beans & peas	NA
Wayne	551	165,345	\$592,071,000	Grains, oilseed, dry beans & peas	Poultry and Eggs
TOTALS	7,694	2,035,169	\$5,780,145,000		

Significant economic growth opportunities exist for the region with a focus on value added agriculture and food processing. Traditionally, value-added agriculture is associated with taking raw material and processing them into a product with greater economic worth. The United State Department of Agriculture (USDA) (2015) definition of a value-added agricultural product is one that:

- Has undergone a change in physical state
- Was produced in a manner that enhances the value of the agricultural commodity
- Is physically segregated in a manner that results in the enhancement of the value of the agricultural commodity
- Is a source of farm- or ranch-based renewable energy, including E-85 fuel
- Is aggregated and marketed as a locally produced agricultural food product

Global Trends in Agriculture, Value-added Agriculture and Ag-Tech

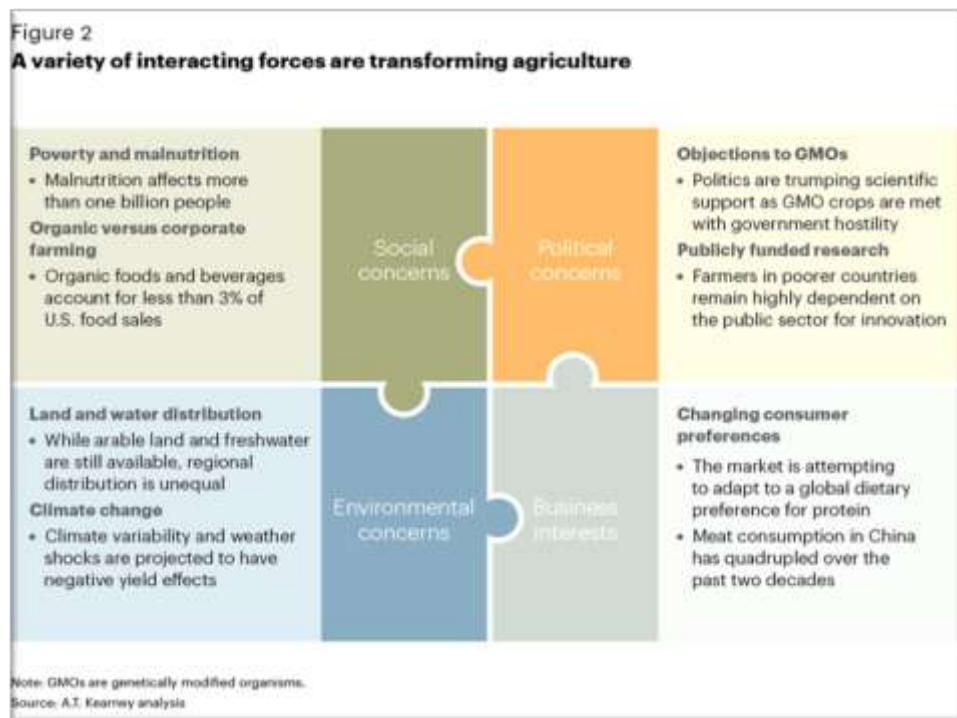
A.T. Kearney, a leading research company in the agriculture field, created the following flow graphic to demonstrate the product flow of a typical agriculture value chain.



A great deal has been written recently on future trends in agriculture. Similar predictions in most other industries, the agriculture industry will almost certainly be impacted by rapid advances in

technology, new thinking about global food chains, changing consumer preferences, and new scientific breakthroughs. New pressures from global demographic and environmental changes will also alter the economics of agriculture. A.T. Kearney compiled the chart to the right a few years ago, which shows

how some of these changes are interacting.



The pandemic is likely to alter the expectations slightly. The past three decades have seen historic reductions in worldwide poverty and dramatically increased the markets for food, and especially proteins. North Carolina's hog and poultry producers have prospered. Early predictions suggest that the pandemic could hurt developing countries' food import capabilities severely. National investments in crop and animal research around the world will also likely be curtailed by government budget pressures. **Aggressive marketing to broaden the region's export options could provide some security against any specific impact.**

Many emerging consumer trends that are further affecting value-added agriculture will continue. These include:

Consumer Purchasing Paths

Most purchasing decisions are now made online, even if the actual purchase is not done online. Internet reviews, especially among peers, are a highly trusted source of consumer opinion. The pandemic has further reduced face to face interactions and has solidified current remote purchasing habits. Continuous social media monitoring to ensure that the region's products maintain a good reputation will be needed. There are good examples of international region's that have built an on-line quality brand for their agriculture products, increasing both demand and price margins. A good example is the region (County) of Kerry in Ireland with their Kerry Gold Campaign.

Health Consciousness

In 2020 health considerations have taken the spotlight. An aging population is intent on preserving health and is investing in health and wellness monitoring tools. The trend continues for fewer highly processed convenience items, and more fresh produce. More buyers are willing to pay a premium for healthy and fresh items. **Adequate cold storage facilities are needed to respond.**



Due to evidence showing health benefits, fewer people are skipping breakfast, which improves the market for breakfast foods, although pre-pandemic cereals were being replaced by other options. Value-added farmers can fine-tune messaging to illustrate health benefits or develop new uses for existing products. Because of the society shutdowns in the United States more people have been cooking at home, reducing restaurant consumption.

Hangover from the Great Recession and Now the Pandemic Has Created Thrifty and Wary Consumers

Consumers shop around more, mostly on-line, and are more selective with the products and services they decide to buy. Many are looking for bargains. Value-added strategies include offering coupons and offering just-in-time delivery of products only when needed. Home delivery from food wholesalers and retailers is now an expectation.

Customization of Products and Services

Customers are demanding more individualized products, and companies are responding with more product lines to suit almost any taste or need. For example, a German company mixes and sells customized cereals online, to suit dietary needs, allergies, athletic training regimens, and varied tastes. A benefit for food producers is that they can often reduce the risk involved with introducing new products and can increase profit margins. Those in the value-added food chain can take advantage of this trend by involving customers early in product design, and offering simple personalization options.

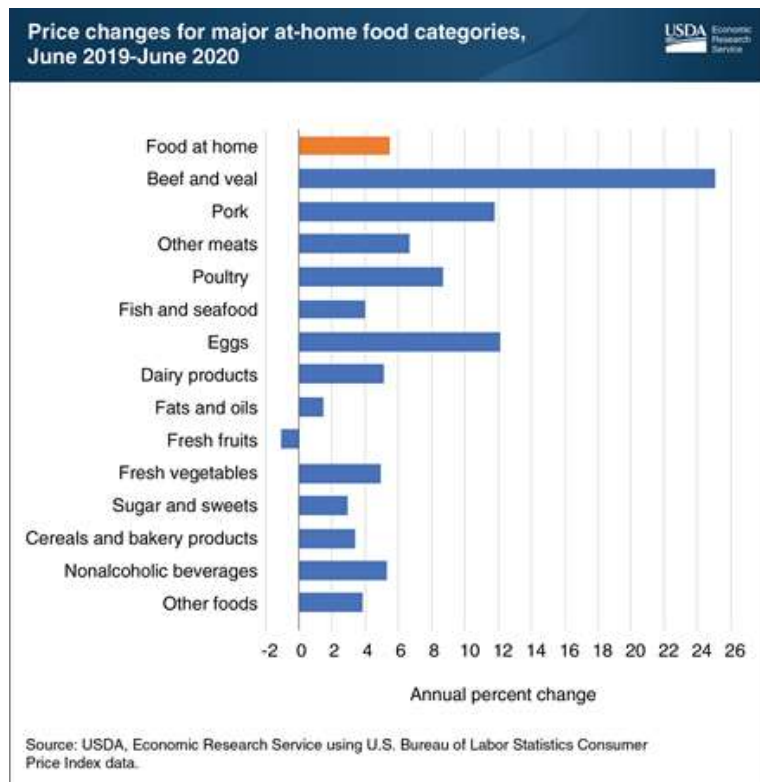
A review of recent literature revealed some themes that could prove important to the future of agriculture in Southeast North Carolina.

- Technological advances in fast-growing climate-resistant genetic crops is changing farming habits and increasing yields while reducing some risks. Bio agriculture research in North Carolina may create new opportunities for communities across the state.
- The use of artificial intelligence and robotics in farming, harvesting, livestock growth and production is increasing productivity, and reducing new employment demands. The inability to find affordable farm labor is a consistent concern for agriculture firms. Again, North Carolina's technology strengths in sensor technology and data analytics could complement and create opportunities in the Southeast region.
- There is a continued shift of farm business structures from smaller family farms to larger aggregated corporations. The pandemic should change the model of a limited number of larger processing facilities to more redundant facilities to guard against future shocks. However, the complexity of federal and state regulations still inhibits small farming.
- Artificial meat is showing signs of emerging as a viable new product that will require new production facilities. Recent studies have proclaimed growth of 30 percent over the past two years.
- Government regulations at the national, state, and local level continue to be in flux, seeking a balance between property rights, safety and security, economic concerns, and community priorities. Recent complaints have been about rapid change and regulators inability to respond at the speed of business.

- In the past few years, the United States government has renegotiated many existing trade relationships. Any new trade agreements will dramatically change the economics of specific agriculture imports and exports. Future trade deals remain very political and will be influenced by upcoming elections.
- The pandemic has had a significant impact on food prices. The USDA chart shows current volatility.

Many current conversations center on the impacts of the upcoming the Fourth Agriculture Revolution. The third revolution included the introduction of fertilizers, pesticides, and big efficient machinery. The impacts of artificial intelligence, autonomous robots, drones, and advanced genetics will each alter current agriculture models. All of these technologies are already permeating agriculture planning for large companies and corporate farms.

The pandemic may accelerate implementation. Like many transformations, there will be winners and losers.



Military and Defense Spending

North Carolina's Southeast is home to seven military institutions (Fort Bragg Army Base, Pope Army Airfield, Marine Corps Air Station Cherry Point, Marine Corps Base Camp Lejeune, Seymour Johnson Air Force Base, Marine Corps Air Station New River, and Military Ocean Terminal at Sunny Point) and over 100,000 active duty

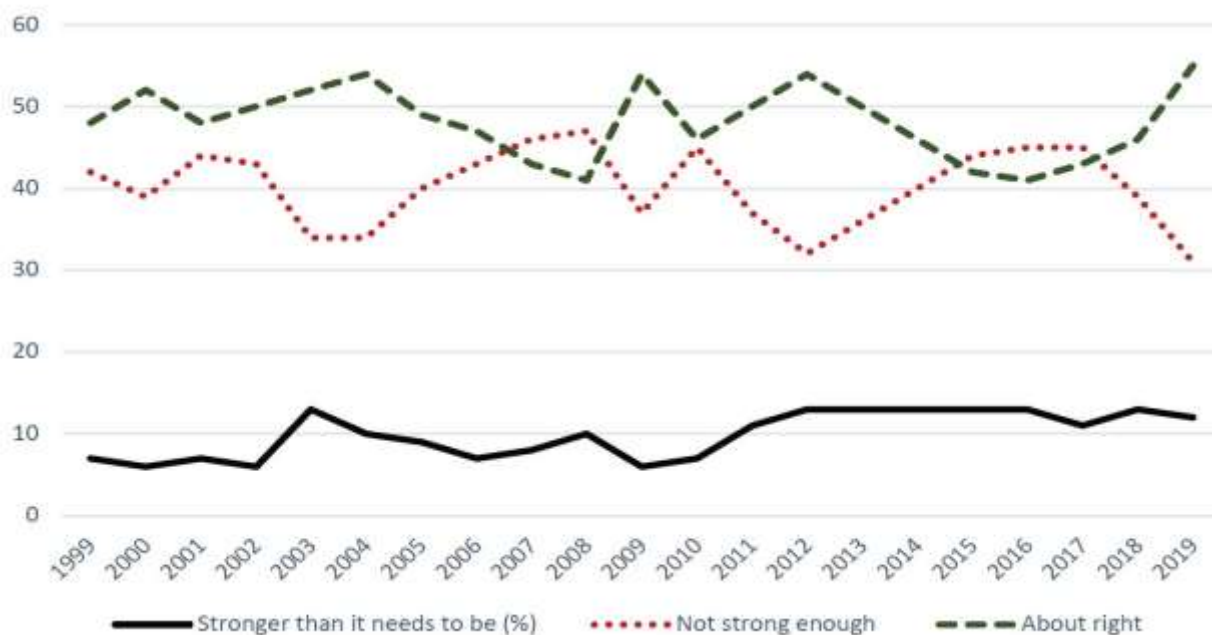


personnel. Annual Department of Defense spending approaches \$3 billion. Future military operations and investments have tremendous impacts on the region.

For the past 70 years the U.S. military has consistently maintained a large, superiorly equipped force, deployed strategically around the world to deter attacks, and protect strategic economic interests. In recent years, the focus has shifted slightly to emphasize the current administration's priorities, including border protection, is encouraging increased investments by allies, but remains focused on great power competition.

U.S. spending on defense has consistently been the highest in the world. As the Chart below, from the Center for Strategic and International Studies, shows an overwhelming percentage of Americans have consistently believed that military spending was about right or not enough. In the past few years there has been a drop in those believing that spending was "not strong enough".

Shifting American Public Feelings on National Defense



Pre-pandemic the federal debt was expected to keep future Department of Defense growth somewhat constrained. The additional trillions of dollars appropriated by Congress as stimulus to arrest the disruption in the economy has dramatically increased the national budget deficits, adding uncertainty to future budgets. What happens globally will heavily influence those budgets, and while there are deficit hawks that could suggest cuts, there are many advocates for increased and modernized capacity.

North Carolina's Southeast has been impacted in the past by Base realignment and closures. The last round was in 2005. Future thinking is currently unknown.

COVID-19 may have some broader lasting impacts on future security thinking and strategy.

(1) Rethinking Security More Comprehensively.

No one would suggest that we have entered an age where other state powers do not pose a military threat to the United States. During the past few years tensions around the world have remained high and the pandemic has sharpened some smoldering differences. Recently the Secretary General of the United Nations opened the session with a speech that included the comments, *"We are moving in a very dangerous direction. Our world cannot afford a future where the two largest*



economies split the globe in a Great Fracture — each with its own trade and financial rules and internet and artificial intelligence capacities. A technological and economic divide risks inevitably turning into a geo-strategic and military divide. We must avoid this at all costs." Military security will remain a priority for the US, but safety and security are also more often being discussed differently, and more broadly.

Health, weather, cybersecurity, and other threats are now part of the public conscience. Devoting increasing appropriations to those specific areas could change funding status quo. The National Guard has played a more visible role recently to help states deal with health and weather events. Having a flexible rapid deployment capacity seems sensible and is likely to expand. Whether this has an impact on troop counts in North Carolina's Southeast is not predictable, but just like many major corporations, the military could be moving toward more flexibility to raise and lower their labor force to meet changing needs is a trend. An opportunity may be as a home base for staging the forward supplies to respond to these events.

(2) Forward Deployment Strategies.

According to research by the CATO Institute the US currently has 800 overseas facilities in 70 countries ranging from main operating base with more than 10,000 troops to small facilities with headcounts less than 100. In Europe alone the United States has over 80,000 troops. Many believe that these should be scaled back due to changing needs and, in some cases, increased risk to smaller facilities. If reshoring troops becomes a priority, major bases in the United States, and in the Southeast, could benefit.

(3) Technology Modernization

According to the Heritage Foundation, *“the goals of modernization are to close a capability gap, provide a qualitatively improved capability, and/or reduce costs. Modernization entails the replacement of an existing military technology, generally a platform, weapon, or system, with one that is significantly more capable, even transformational.”* More than upgrading specific systems or processes, the next round of transformational technology could be led by advanced materials, intricate information systems, smart sensor technology, and artificial intelligence. North Carolina’s private sector, and universities, excel in many of the emerging technology platforms. Opportunities exist to develop expanded and focused defense contracts in these budding areas.

Building relationships with companies that are already in North Carolina, but may want to be closer to the Southeast’s bases as their specialties become more important to the military, should be a midterm goal.

Outdoor Recreation

COVID-19 has accelerated the national focus on outdoor recreation. Camping and the use of public parks surged due to the safety concerns with other entertainment options such as theme parks, movie theaters, and urban travel. Equipment sales were up significantly this summer, and thousands of new campers are expected to underpin the industry for years.

This summer also saw growth in the cycling industry. Cycling sales are up 63 percent with June sales alone close to \$700 million, according to the NPD Group. Another pastime gaining new enthusiasts is birdwatching. The New York Times recently published an article discussing the rise of bird-watching and a renewed interest in nature and outdoor activities associated with the pandemic. North Carolina’s Southeast is beautiful, with fishing, hiking, boating, and cycling opportunities at every turn. Promotion of these regional assets could lead directly to more tourism dollars, but it could also solidify the region’s appeal to new residents. Talent attraction remains critical to addressing workforce needs, and these emerging trends creates a new opportunity.

One of the activities most associated with the region is golf. The Southeast is home to over 100 championship golf courses. In early September, the United States Golf Association announced that it was establishing a second home in Pinehurst. Golf House Pinehurst will include a new equipment-testing facility, innovation hub, and museum and visitor center. With the additional announcements of Pinehurst #2 as a rotational home of the US Open, the region has solidified its place as golf



destination. Even more exciting are the opportunities for a new, more complete, business sector.

It has been a turbulent decade for golf, but 2018 and 2019 saw a rebound in public interest and the pandemic has produced a strong resurgence in equipment sales and the number of rounds played. **It is reasonable to expect that golf manufacturing and research will grow as a regional cluster.** Much of golf's testing and development is currently concentrated in California. North Carolina's business climate and affordability offers a compelling case for relocation. An aggressive effort to testing, research and manufacturing companies could yield strong results.

Many hope that the recent surge in rounds played, and the new younger and female players that have been draw to the sport during the pandemic, will form the foundation for future growth. Growth in participation comes at a time where technology, fashion and membership are also changing to meet evolving customer expectations.

Healthcare Operations

Healthcare costs and availability were considered critical to the Southeast's competitiveness prior to the pandemic. **Looking forward, many believe that COVID-19 will permanently alter the delivery and economics of healthcare.** In the upcoming target industry analysis, there is a discussion of healthcare work in the Southeast, but some industry trends are being felt everywhere.

Recent executive orders have reduced federal financial support for insurance exchanges, reduced Medicaid spending, expanded the use of health savings accounts and restricted access to insurance exchanges for undocumented immigrants. Each has an impact on availability and price.

Medicaid expansion has been implemented in 37 states and the District of Columbia, but has not been expanded in North Carolina. This is a hotly debated political issue, but it is also an issue that impacts the future business structure and delivery of health service.

The pandemic has caused a surge in telehealth, a trend that might provide greater access to those in need that are not proximate to an existing provider. It could also weaken rural delivery by siphoning off customers from rural centers that are already challenged by slow growth or population decline.

Mergers and acquisitions are widespread in the industry with efficiency as a key strategy. The greatest looming impact could come from new players like Amazon, Google, and Walmart. If their current forays into the industry continue to expand, as seems likely, they will attract both doctors and patients, further weakening smaller and more rural hospitals.

Customer driven healthcare is another emerging trend as people demand more transparency and the ability to compare costs and outcomes between providers. This shift often referred to

as a move from fee-based to value-based, could reduce costs and improve overall health outcomes.

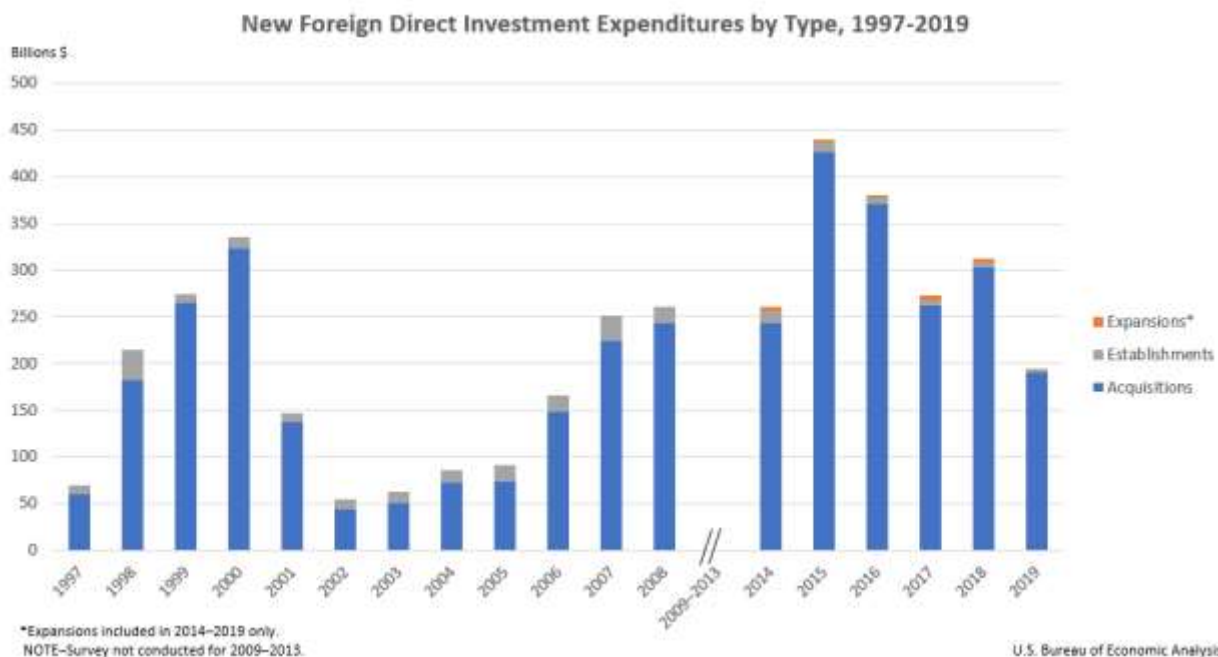
Reimagining how a community could remain economically competitive to attract new business with only remote healthcare is difficult. Advocacy to retain the existing hospital network and healthcare quality and availability in the Southeast will be critical to the region's investment attraction efforts.

Foreign Direct Investment and Exports

Attracting Foreign Direct Investment and exporting goods and services are essential to a strong regional economy. North Carolina and the Southeast Region have benefitted from consistent, strong Foreign Direct Investment. According to research from the Raleigh Chamber,

foreign-owned firms employ more than 250,000 people in the state and have contributed more than \$14 billion to the state's economy over the past eleven years. The Global Business Alliance estimates that there are over a thousand international employers in the state, and that close to half of the total workers are in manufacturing. **They also report that employment growth from foreign owned firms has increased by 34.6 percent over the past five years, almost three times faster than overall private sector growth.**





North Carolina’s overall business climate and cost structure offers a good opportunity for global firms to operate. Today, more than 60 international companies have a presence in the Southeast. Foreign Trade zones 214 and 93 and the Ports of Wilmington and Morehead City are critical to the region’s success. The Southeast’s strengths for all types of manufacturing, good infrastructure, affordability, and training capacity creates a good opportunity for attracting Foreign Direct Investment. **International marketing, in conjunction with NCPED in the targeted industries, will remain a productive strategy.**

Exports

North Carolina, which exported over \$34 billion worth of goods in 2019, remains among the top 15 states for annual exports. The top exports for the state in 2019 were:

- | | |
|---|---------------|
| 1) Aircraft including engines and parts | \$2.3 billion |
| 2) Immunological products | \$1.6 billion |
| 3) Miscellaneous medications | \$1.1 billion |
| 4) Miscellaneous aircraft parts | \$806 billion |
| 5) Antisera, other blood fractions | \$775 million |

Other significant exports important to the Southeast include Meat of Swine, Cotton Yarns, Tobacco and several types of machinery or machinery parts, Chicken and Chicken Parts and food preparations.

According to the Office of the US Trade Representative, North Carolina is the country’s 13th largest agricultural exporting state. The top agricultural exports for the most recent year that statistics are available are pork, tobacco, other plant products, broiler meat and soybeans.:

After several decades of rapidly increasing globalization, many expect a slowing in the post-pandemic years. Trade conflicts and the hangover from the global recession will slow the growth in exchange of goods, but this trend is probably a slowdown in the growth, not a reversal. A greater focus on exports is another likely trend. The US trade deficit has surged in recent months, including July numbers that were the greatest in the past 12 years.

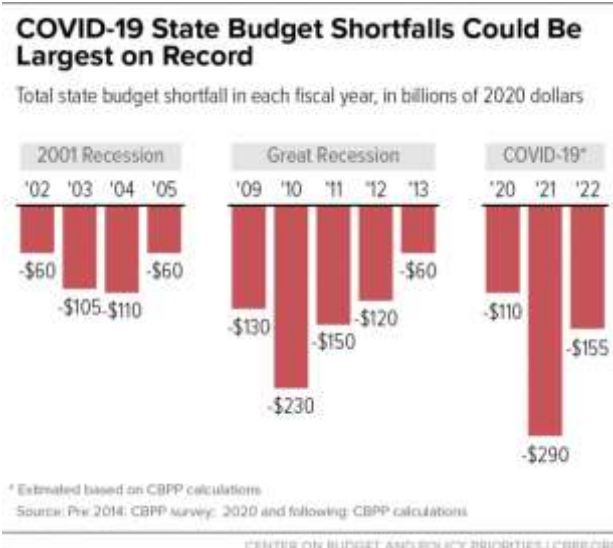
Other Post-Pandemic Trends Impacting North Carolina's Southeast

Constrained State and Local Budgets should be expected for the next few years due to losses in tax revenue. The Center on Budget and Policy Priorities is anticipating record state shortfalls in the next three years. Their chart shows that next year shortfalls could exceed those from the Great Recession.

Real Estate Needs Will Change with a greater short-term focus on industrial buildings and warehouse and distribution. There is currently a national shortage of good buildings with surging demand due to online shopping and reshoring. New office construction is likely to slow due to work-from-home shifts. New retail and hotel projects will probably be significantly slower due to reduced demand. Home construction has remained steady and is expected to be consistent.

Mental Health Needs Have Increased during the pandemic with many indicators experiencing big increases.

Face to Face Marketing will be Slow to Return. Economic developers will be using more drone video, ZOOM meetings, regular web updates with current research and data analytics substituting for trade shows and travel for at least the next 18 months, and maybe longer. Until an effective vaccine has been distributed some site selectors and clients will still be uncomfortable with business as it used to be.



North Carolina's Southeast Workforce Analysis

North Carolina's Southeast competes each day for new investment and new jobs. Success is determined by matching the regional assets with the needs of clients. Many factors are typically part of the client decision process. A good business climate, sufficient infrastructure and appropriate, ready to occupy buildings and ready to build sites are all critical.



In recent years, the factor that has been the most important and received the most attention is talent - a workforce of sufficient size with the skills needed to meet the needs of current and potential employers. Despite current high unemployment, workforce will remain a top factor in post-pandemic economic development competitions.

Area Development's most recent survey of corporate decision makers rated the availability of skilled labor as the second most important factor, second only to highway accessibility. Continuous improvement in the region's workforce quantity and quality will be an ongoing product challenge for all economic development organizations.

Contributors to a regional talent pipeline include parents and grandparents, preschool workers and teachers, guidance counselors, friends, clergy, the military, government programs and employers. Anyone that helps an individual gain the personal and professional skills for a successful career has a role to play. The complexity is inevitable and often frustrating. At a minimum, economic developers provide clients with the workforce-related information they need to make location or expansion decisions.

Combined Ratings*		
CORPORATE SURVEY		
Site Selection Factors	2019	2018
Ranking		
1. Highway accessibility	92.4	87.2 (3)**
2. Availability of skilled labor	92.3	90.5 (1)
3. Labor costs	87.1	89.1 (2)
4. Quality-of-life	82.2	82.8 (6)
5. Occupancy or construction costs	80.3	76.1 (10)
6. Corporate tax rate	79.7	86.7 (4)
7. Energy availability and costs	79.5	77.8 (8)
8. Tax exemptions	75.0	83.0 (5)
9. Environmental regulations	73.0	69.9 (16T)
10. Proximity to major markets	72.6	71.8 (14)
11. Right-to-work state	72.0	70.2 (15)
12. Available buildings	71.3	76.7 (9)
13. Expedited or "fast-track" permitting	70.7	64.9 (19)
14. State and local incentives	70.2	82.5 (7)
15. Inbound/outbound shipping costs	69.8	69.2 (18)
16. Proximity to suppliers	68.1	72.8 (13)
17. Available land	64.4	75.6 (11)
18. Low union profile	62.7	74.4 (12)
19. Training programs/technical schools	60.3	69.9 (16T)
20. Availability of long-term financing	59.5	60.5 (21)
21. Availability of unskilled labor	59.0	59.4 (22)
22. Raw materials availability	56.1	55.6 (23)
23. Accessibility to major airport	50.6	62.7 (20)
24. Water availability	45.2	51.6 (24)
25. Proximity to innovation commercialization/R&D centers	35.7	41.5 (27)
26. Availability of advanced ICT services	26.7	50.0 (25)
27. Railroad service	25.3	46.6 (26)
28. Waterway or oceanport accessibility	20.3	34.1 (28)

* All figures are percentages and are the total of the "very important" and "important" ratings of the Area Development Corporate Survey and are rounded to the nearest tenth of a percent.

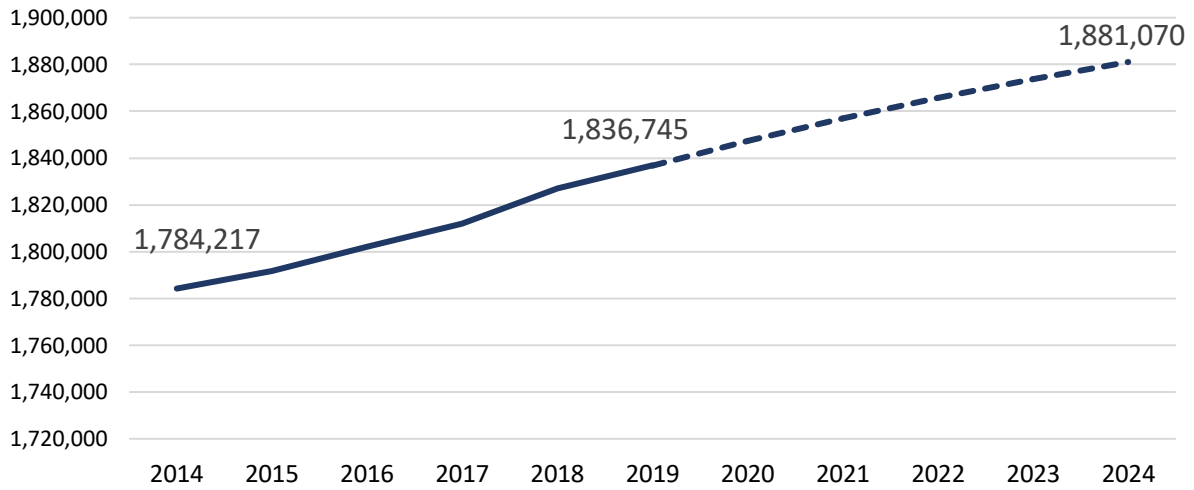
** 2018 ranking

Workforce Data

Regional Population

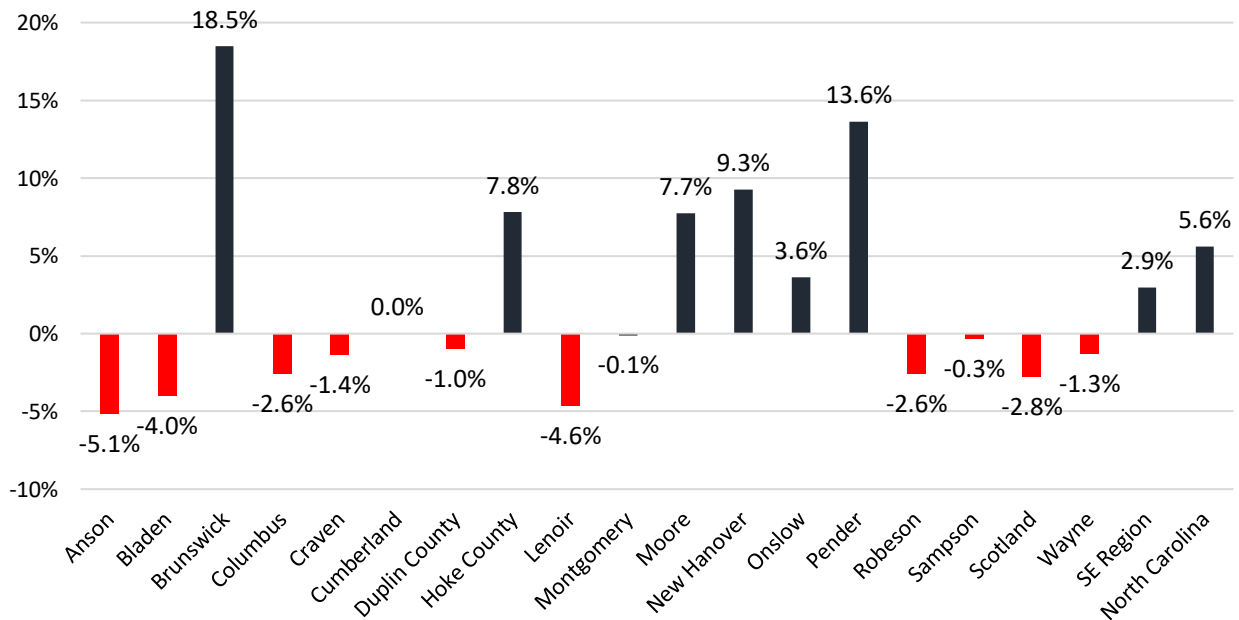
Over the past five years (2014-2019) the region's population grew by 2.9 percent from 1,784,217 to 1,836,745. Current estimates are for growth to continue to just over 1,881,000 in 2024.

NCSE Population Growth and Projections 2014-2024



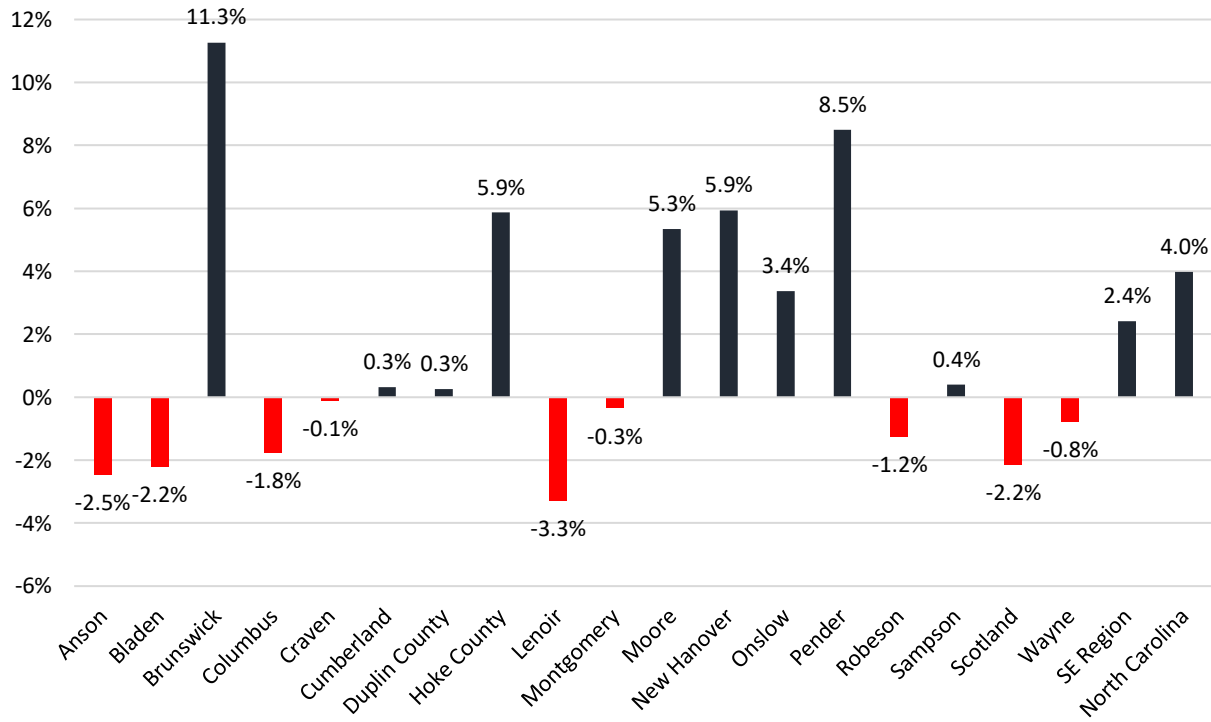
Population growth over the past five years has been uneven across the 18 counties, with about half the region's counties growing or remaining stable and the other half losing population.

Population Growth 2014-2019



Current projections are for this trend to continue with mixed population growth.

Projected Percent Population Change 2019-2024



Regional Labor Force

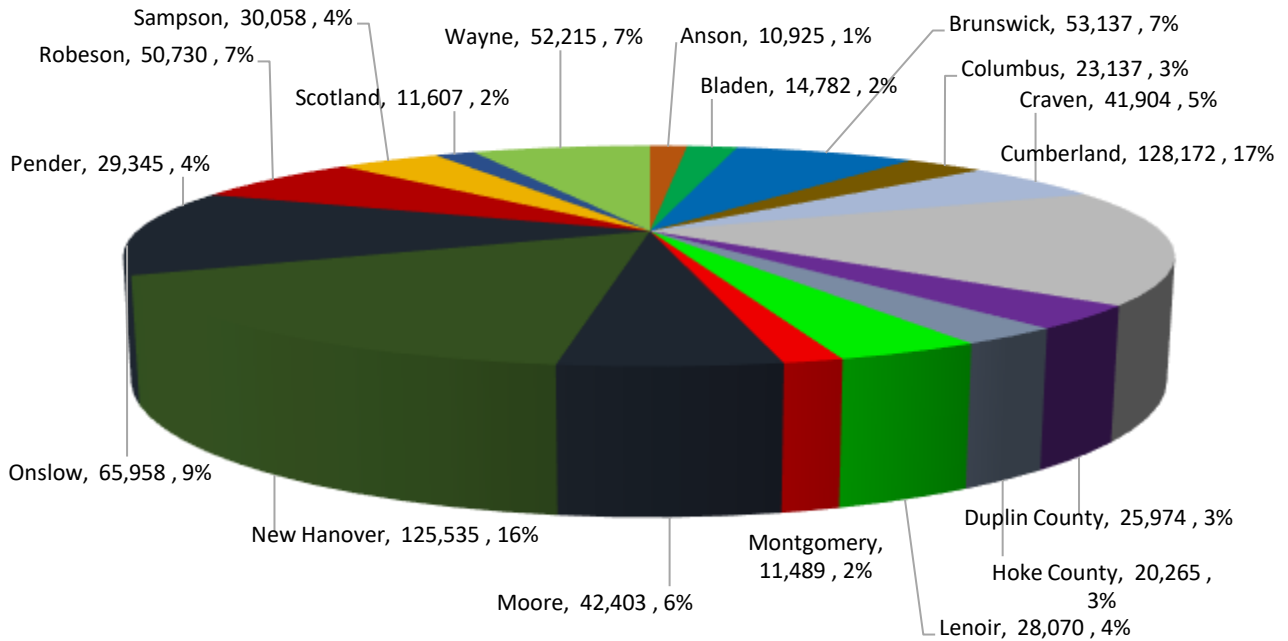
The regional labor force totals approximately 765,000 workers. The largest county labor forces are in New Hanover and Cumberland which combined represent about 33 percent of the regional pool. Until recently the unemployment rates across the region were near historic lows. The impact of the current COVID-19 pandemic has raised unemployment rates across the country and the region.

Total Working Age Population	1,493,049
Current Labor Force	765,706
Labor Force Participation Rate	51.29%

The pie chart below shows each county's total labor force and the percentage of the region's total.



Regional Labor Force 2019

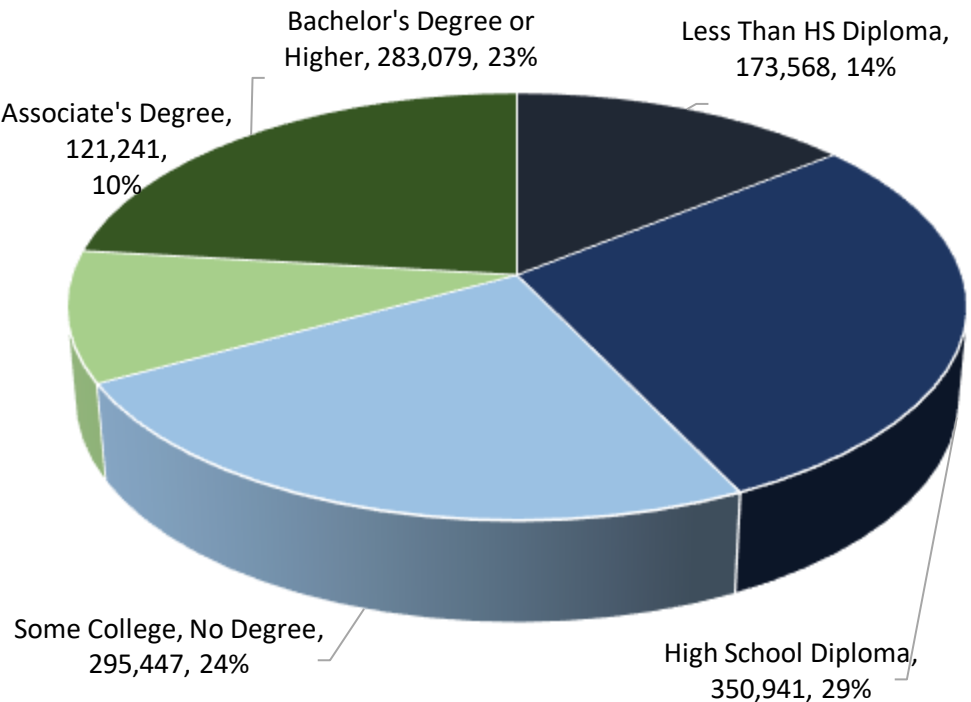


Note: Labor force totals include payroll employees covered by unemployment programs (US Bureau of Labor Statistics QCEW), payroll employees not covered by unemployment programs, and self-employed.

North Carolina's Southeast Population Educational Attainment

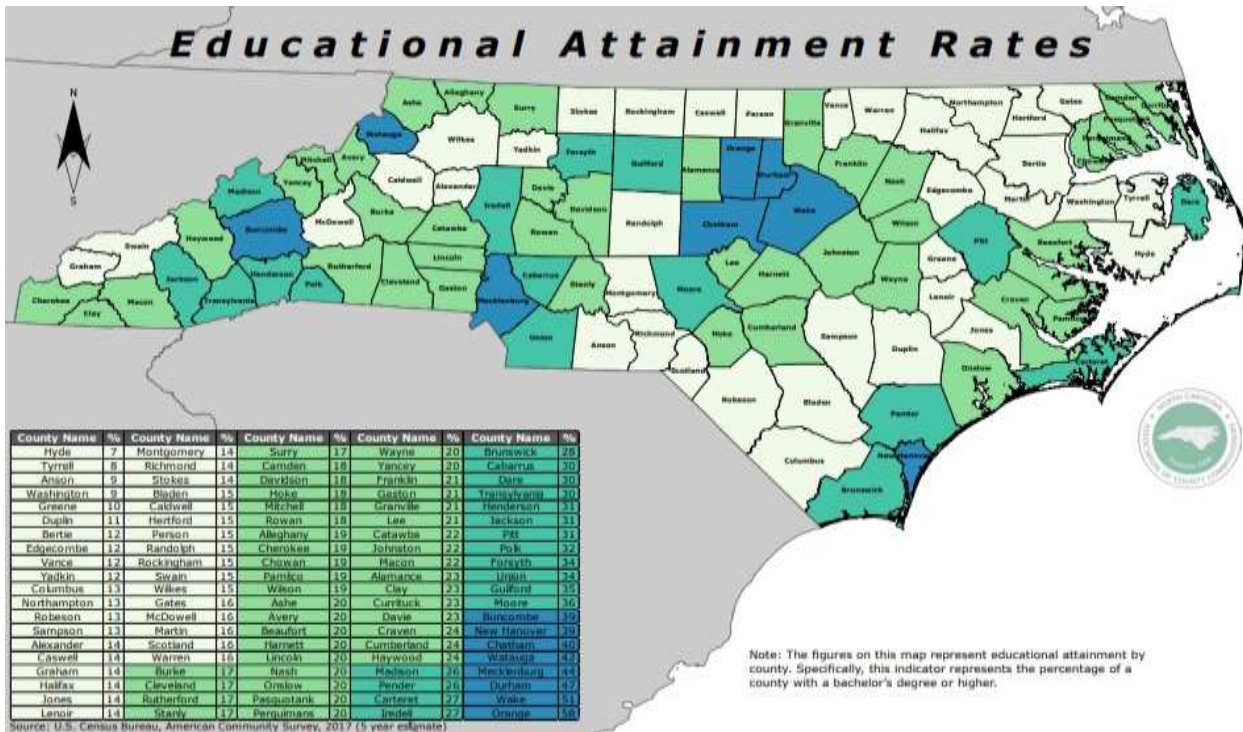
About one third of the region's adults, just over 400,000 people, have a college associate's degree or higher.

As the chart below from the North Carolina County Commissioner's annual *Databook* shows, educational attainment is another factor that varies widely across the Southeast region.



Twenty percent or more of the populations of New Hanover (39%), Moore (36%), Brunswick (28%), Pender (26%), Craven (24%), Cumberland (24%), Onslow (20%) and Wayne (20%) have attained a bachelor's degree or higher.

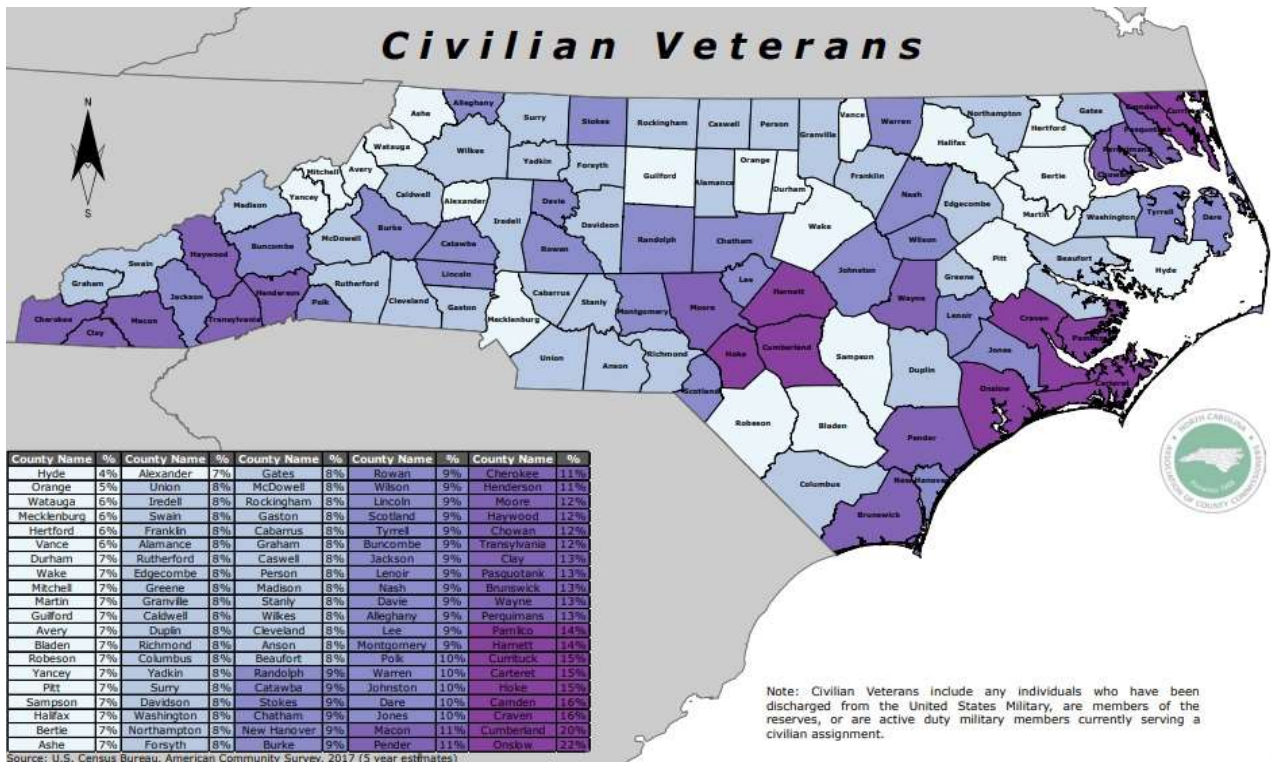
	NC's SE Region	North Carolina	U.S.
Less Than 9th Grade	6.0%	6.0%	6.5%
9th Grade to 12th Grade	8.2%	7.6%	6.9%
High School Diploma	28.7%	26.3%	27.5%
Some College	24.1%	21.4%	20.6%
Associate's Degree	9.9%	9.0%	8.1%
Bachelor's Degree	15.5%	19.1%	18.8%
Graduate Degree and Higher	7.7%	10.6%	11.5%



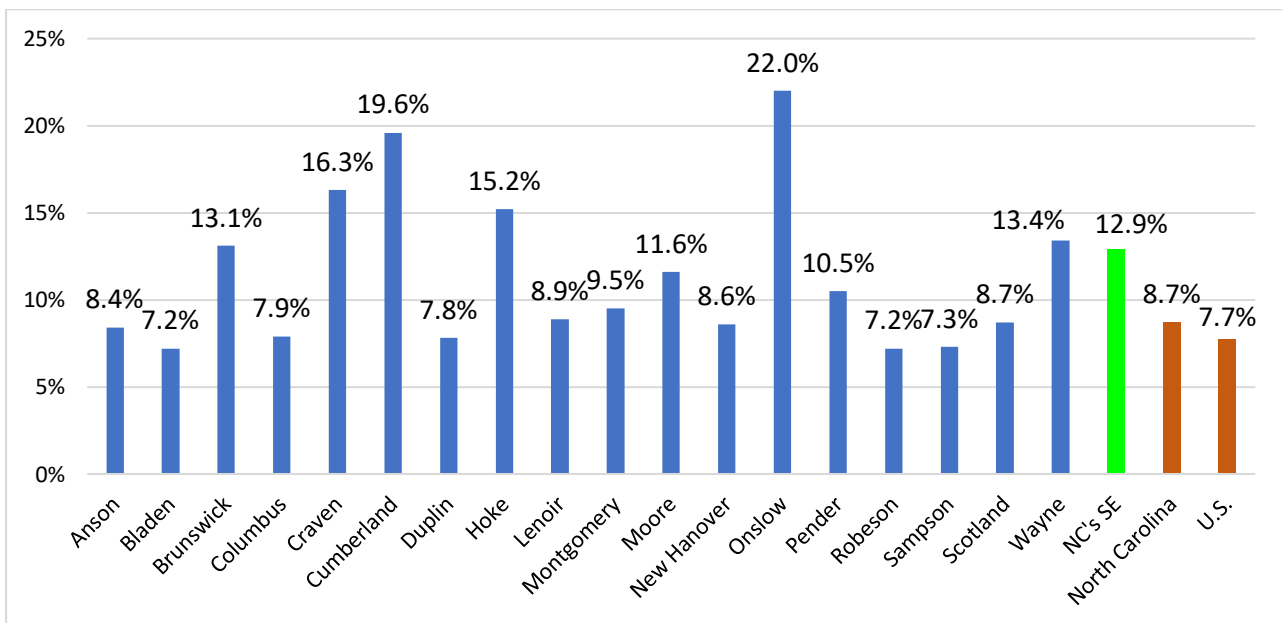
The population includes slightly over 363,000 millennials, reflecting a slightly older workforce than the national average, but with a “retiring soon” risk just at the national average. Racial diversity is slightly higher than the national average.

The skills honed in the armed forces are coveted by employers. The percentage of veterans in the region is well above the national average and several counties in the region are statewide leaders in the percentage of civilian veterans, including four of the top five.

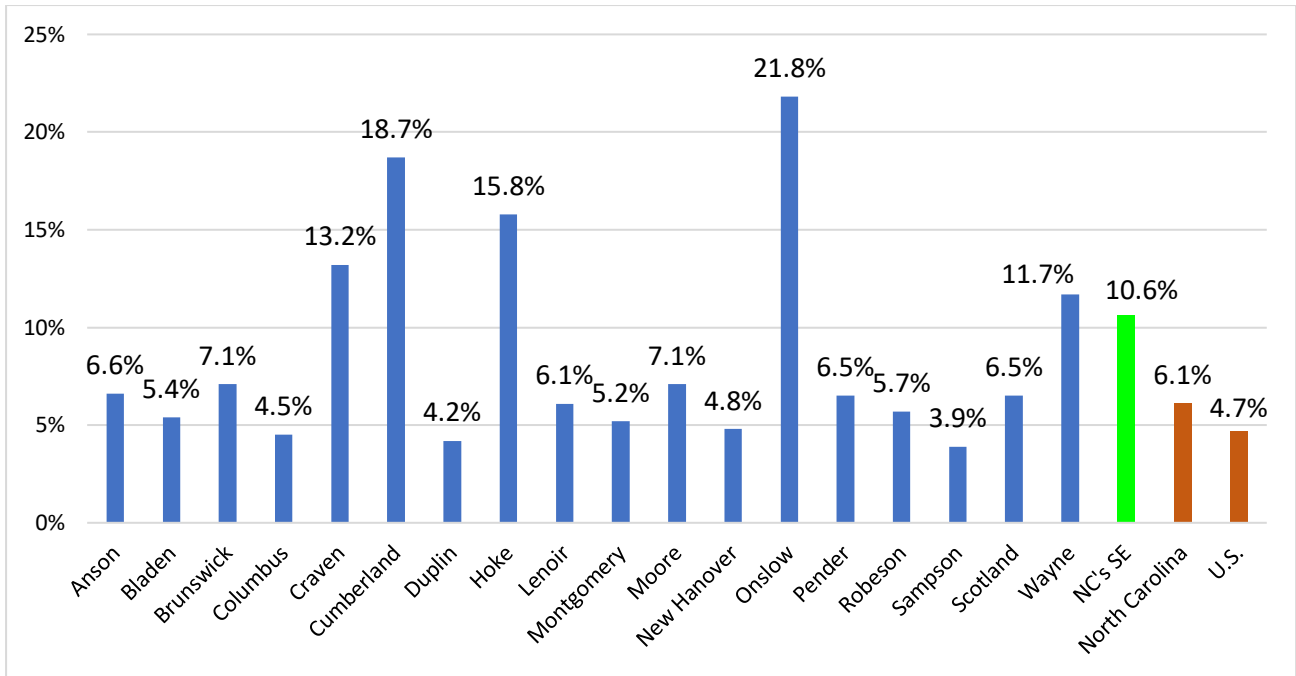




Civilian Veteran Population, 2017



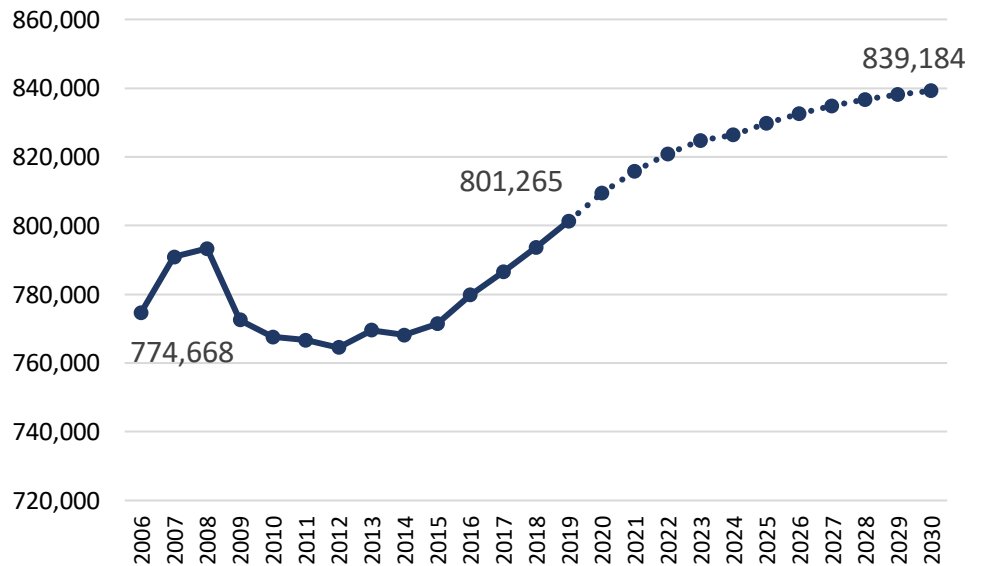
Civilian Veteran Percentage of Labor Force, 2017



Estimating Future Workforce Demand

NC's Southeast Region – Total Jobs

From 2014-2019 jobs increased 4.5 percent in the region. Although slower than the state or national rate, regional job growth outpaced regional population growth. The projection is for job growth to continue, although COVID-19 impacts are difficult to incorporate into the models.

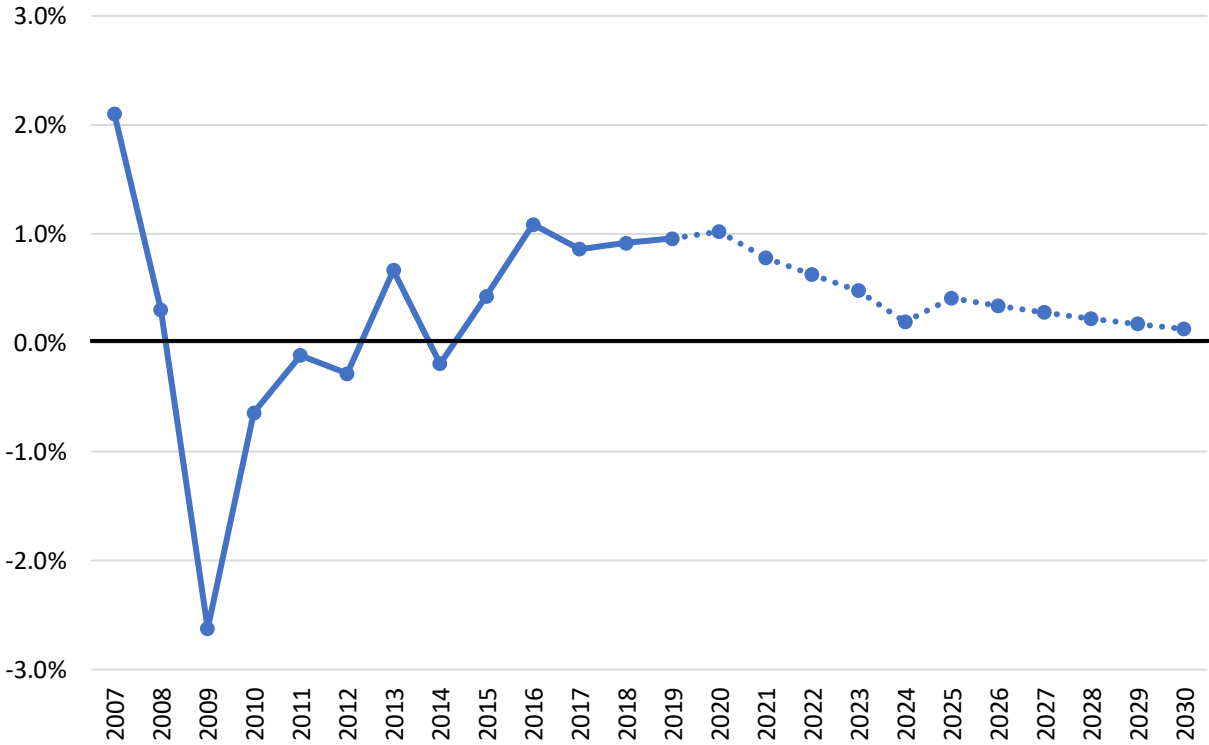


A longer view shows the significant impact of the 2007 great recession on the region, and the subsequent bounce back.

When new end-of-year data is available, the recent downturn due to the pandemic will be reflected. **The chart below shows actual and projected annual job change. While growth is**

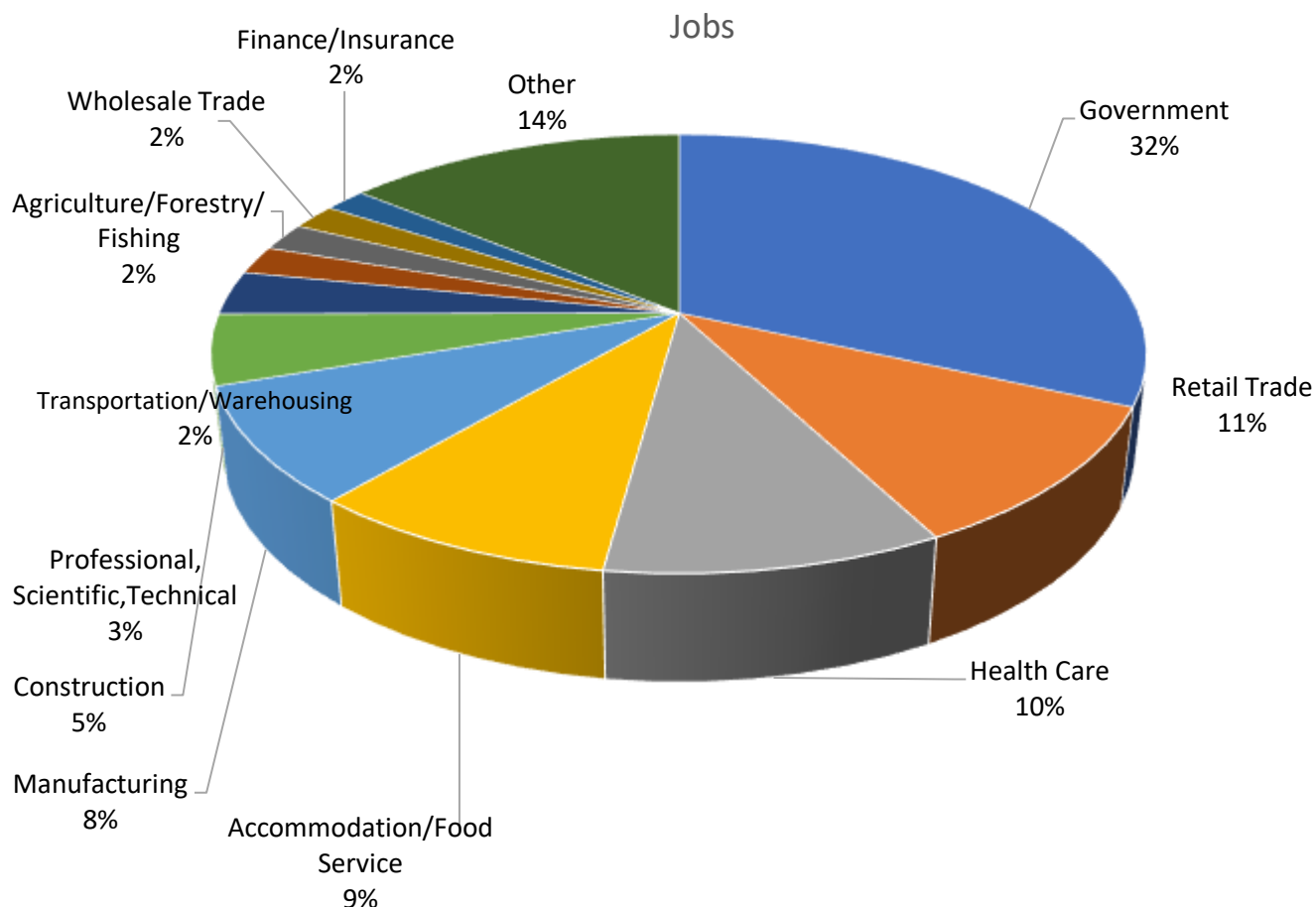
projected over the next decade, the annual job growth rate is expected to slow with new data showing the need to replace jobs recently lost.

NC's Southeast Region – Total Percentage Jobs Growth 2006 - 2030



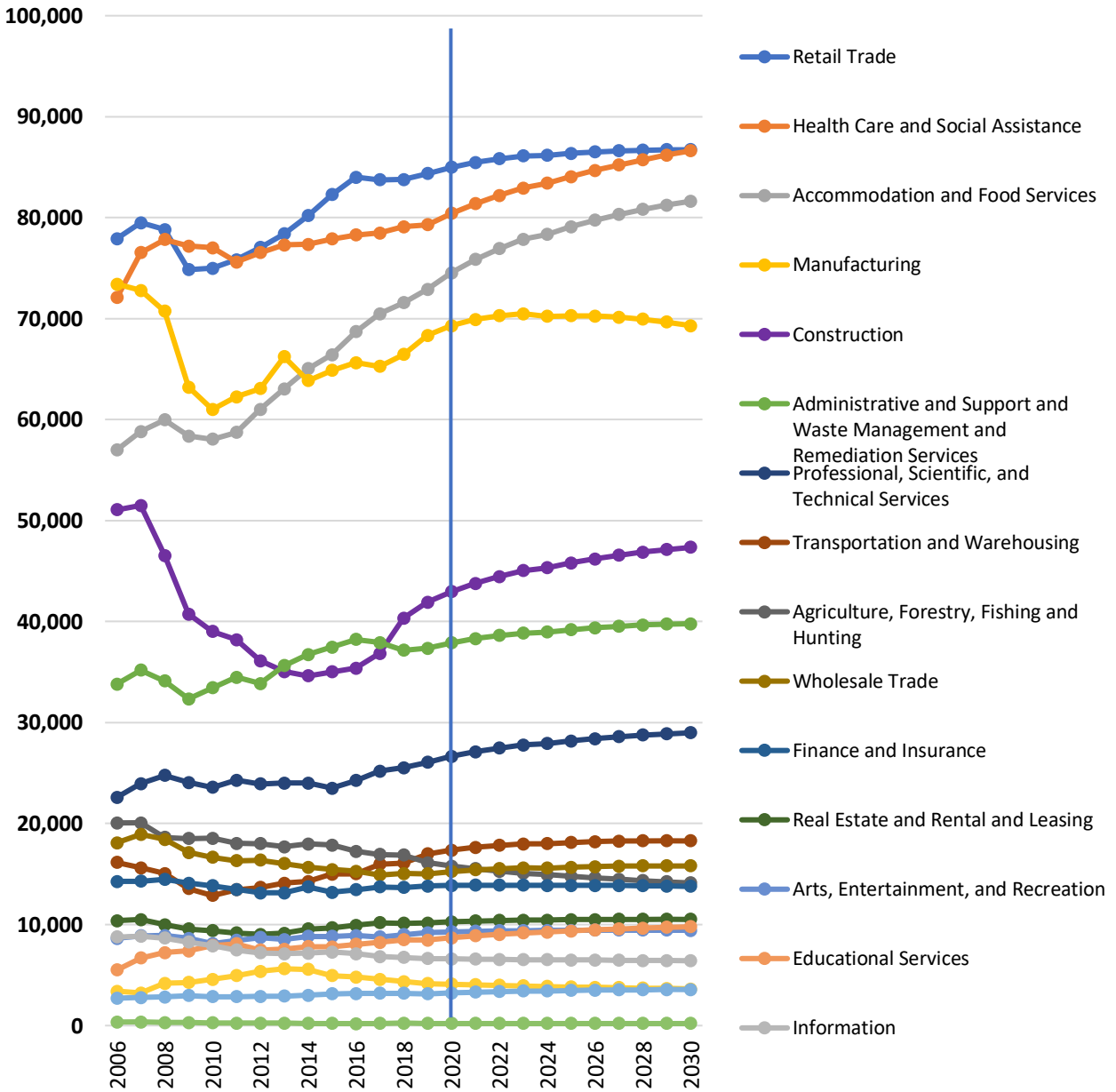
Southeast Jobs 2019

End of the year data for 2019 shows the overall job market in the region. Government jobs, including the military, account for close to one-third of all jobs. Other significant sectors include Retail Trade, Health Care, Accommodation and Food Service, and Manufacturing.



NC's Southeast Region – Non-Government Jobs by Sector 2006-2030

Government jobs have remained relatively stable and are not included on this chart to make other changes easier to see. Recent growth in Healthcare and Social Assistance, Accommodation and Food Service, Construction, and Professional, Scientific and Technical Services are all expected to continue over the next decade. After recent gains, Manufacturing job growth is expected to level off due in part to increased automation. Smaller gains are expected in several other sectors.

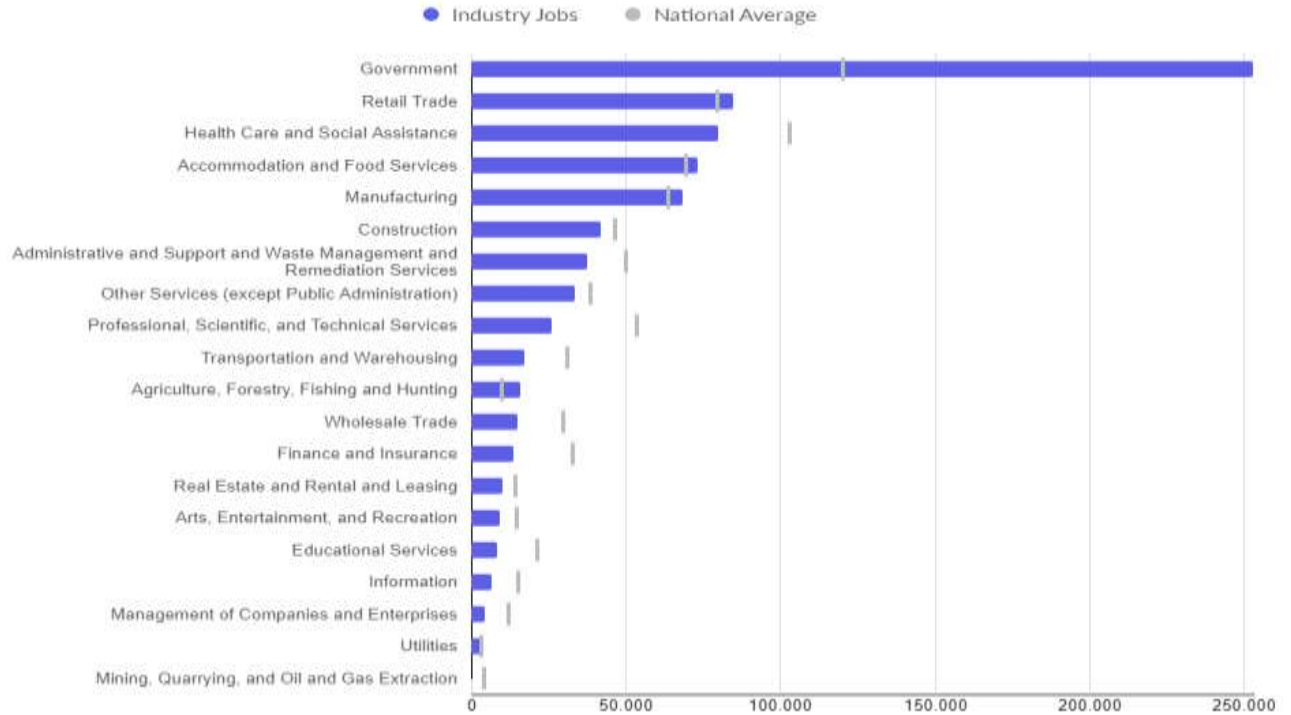


Largest Industries Compared to National Averages

The chart below compares regional employment by industry with the employment that would be expected in the region based on national averages. Government employment is approximately twice the national average and Retail Trade, Accommodation and Food Services, Manufacturing, and Agriculture all exceed the national average. Other industries such as Health Care, Construction, Administrative, Professional, Scientific and Technical Services, Transportation and Warehousing, Wholesale Trade, and Finance and Insurance are underrepresented in the region.

Some underrepresented industries have recently experienced the fastest growth.

Largest Industries

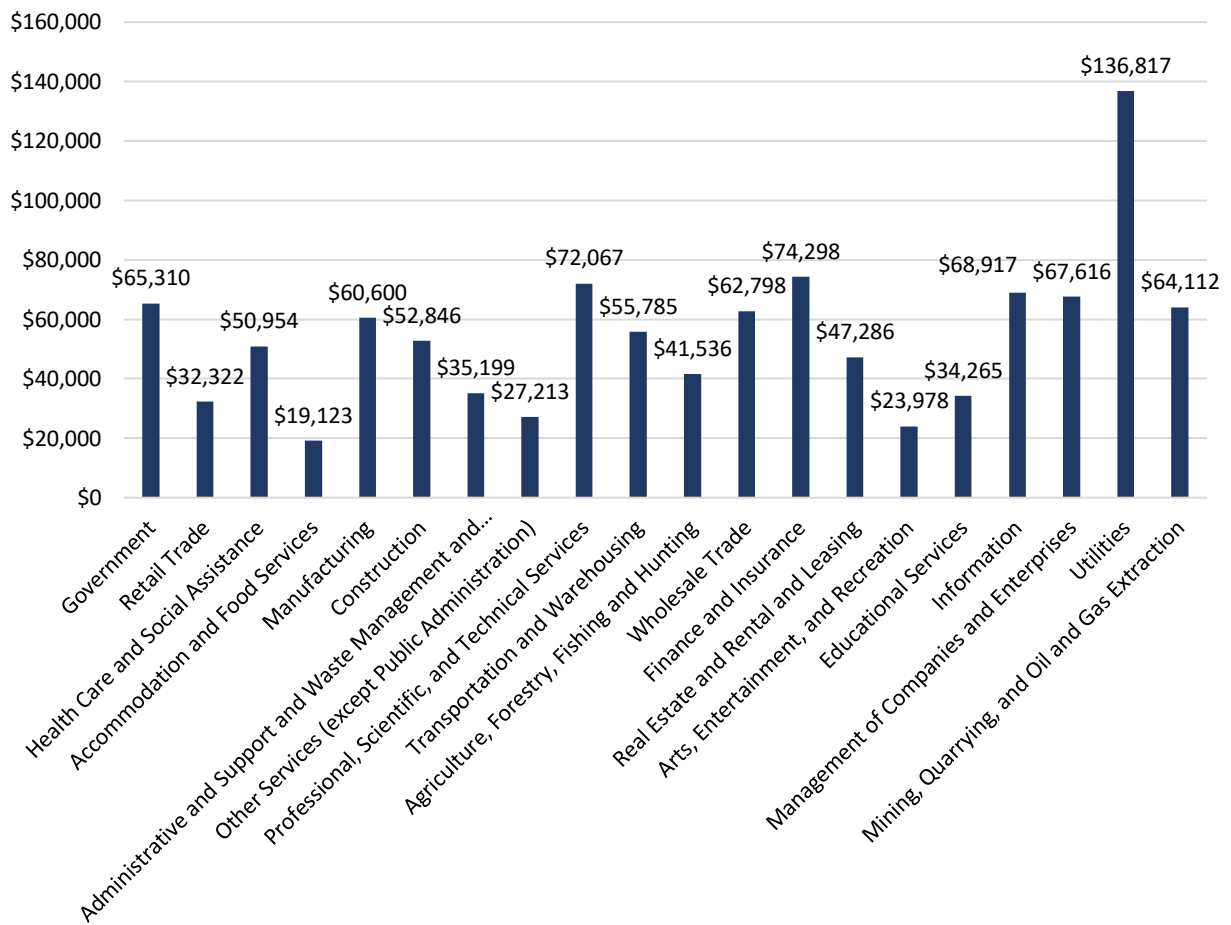


The industries that are growing offer jobs at annual earnings ranging from over \$70,000 for Professional, Scientific, and Technical Services to under \$20,000 for Accommodation and Food Services.

Top Growing Industries	Change in Jobs 14-19	2019 Earnings Per Worker
Accommodation and Food Services	8,388	\$19,123
Construction	7,404	\$52,846
Manufacturing	4,535	\$60,600
Retail Trade	4,413	\$32,322
Other Services	3,341	\$27,213
Transportation and Warehousing	2,879	\$55,785
Health Care and Social Assistance	2,368	\$50,954
Professional, Scientific, and Tech	2,162	\$72,067
Government	1,304	\$65,310
Educational Services	761	\$34,265

The chart below shows the average earnings in 2019 for all sectors.

Average Earnings Per Worker 2019



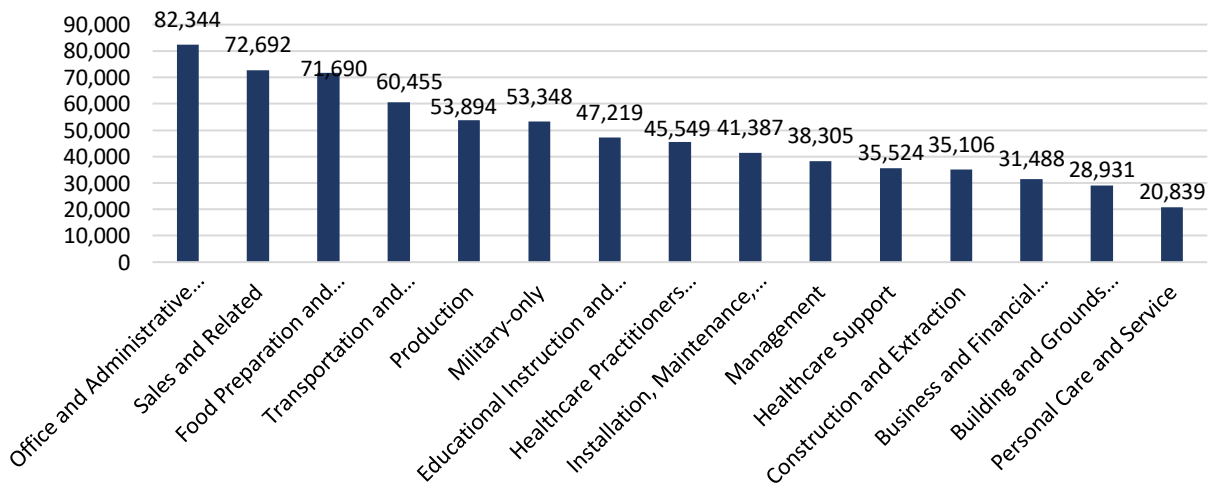


Occupations

The workforce in every industry is comprised of many people doing different jobs. Individual occupations require specific skills. The occupations employing the largest numbers in the Southeast are shown in the chart below. Office and administrative support, sales, and food prep and service are the three largest occupations. Combined, they total over 226,000 jobs, about one third of all jobs.



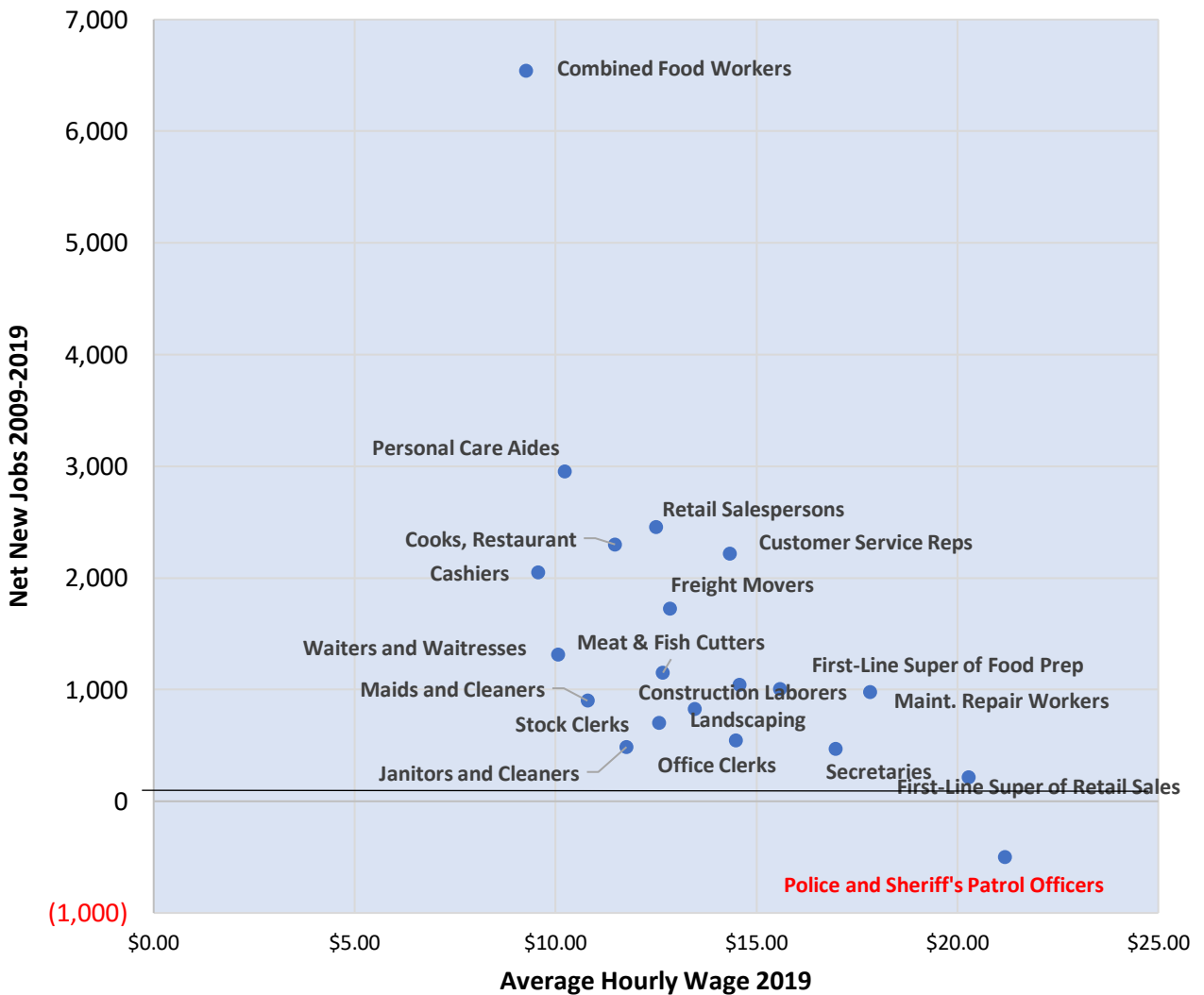
Largest Regional Occupations 2019



Over the past ten years the national economy, and the economy of North Carolina's Southeast region, have been experiencing change driven by globalization, technology, and demographics shifts in birth rates and longevity. Some occupations have been growing while others have contracted. The next three charts show the top 20 occupations by educational requirements and the net change in those occupations from 2009-2019. The first is for occupations with a minimum educational requirement of a high school diploma or less.

2009-2019 Net New Jobs-Occupations Needing High School or Less

20 Largest Occupation Groups in 2019 & Average Hourly Wage

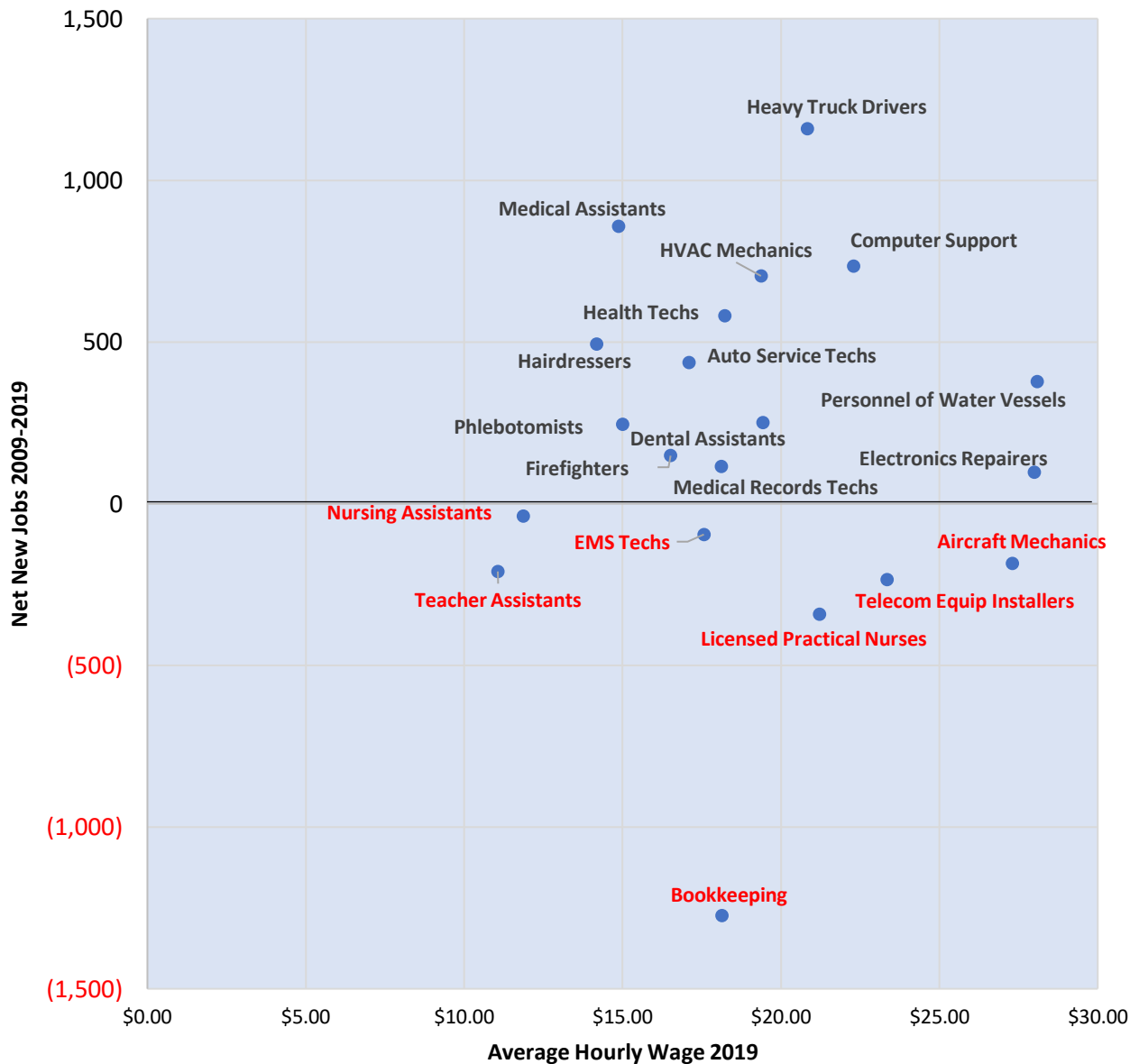


Among the 20 largest occupations, only Police and Sheriff Patrol Officers lost jobs. Unfortunately, that occupation paid the highest wages among these occupations. Combined Food Workers added the most net new positions, close to 7,000, but had an average hourly wage below \$10.00.

The next chart reflects the occupations that require specialized training in addition to a high school diploma, but not a college degree. Many of these occupations were identified by stakeholders as being the most difficult to fill in a tight labor market.

2009-2019 Occupations Needing Post High School, No Degree

20 Largest Occupation Groups in 2019 & Average Hourly Wage



Heavy Truck Drivers, Medical Assistants, Computer Support, HVAC Mechanics, and Health Techs added the most positions over the past ten years. Several of the occupations finished the decade with total jobs losses including Bookkeeping, LNP's, Telecom Equipment Installers, Teachers' Assistants, and Aircraft Mechanics.

The third group features occupations that require an associate’s degree, bachelor’s degree or higher. The single occupation adding the most net new jobs was Logisticians, followed by Registered Nurses, and General Managers. Teachers of all types and Accountants saw the most net losses. These numbers reflect the net gain or loss, but do not show how turnover or retirements would impact the demand.

2009-2019 Occupations Needing AA or Higher

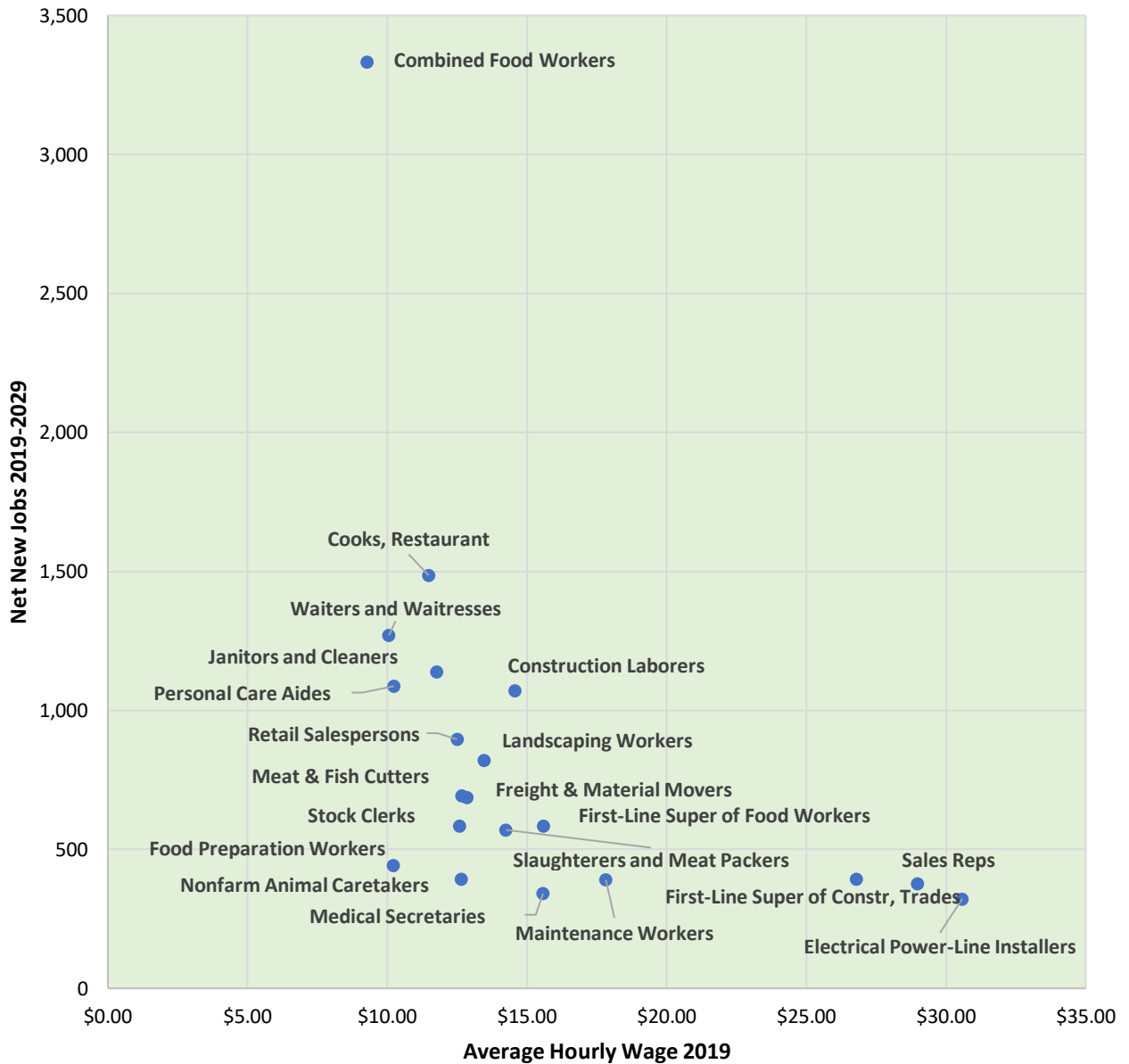
20 Largest Occupation Groups in 2019 & Average Hourly Wage



More important, to help insure a sufficient future workforce, is the ability to anticipate employers' future needs. The next three charts project the 20 occupations that will require the most net new workers by minimum educational requirement. As before, the charts also show the average hourly wage for each occupation.

2019-2029 Occupations Needing High School or Less

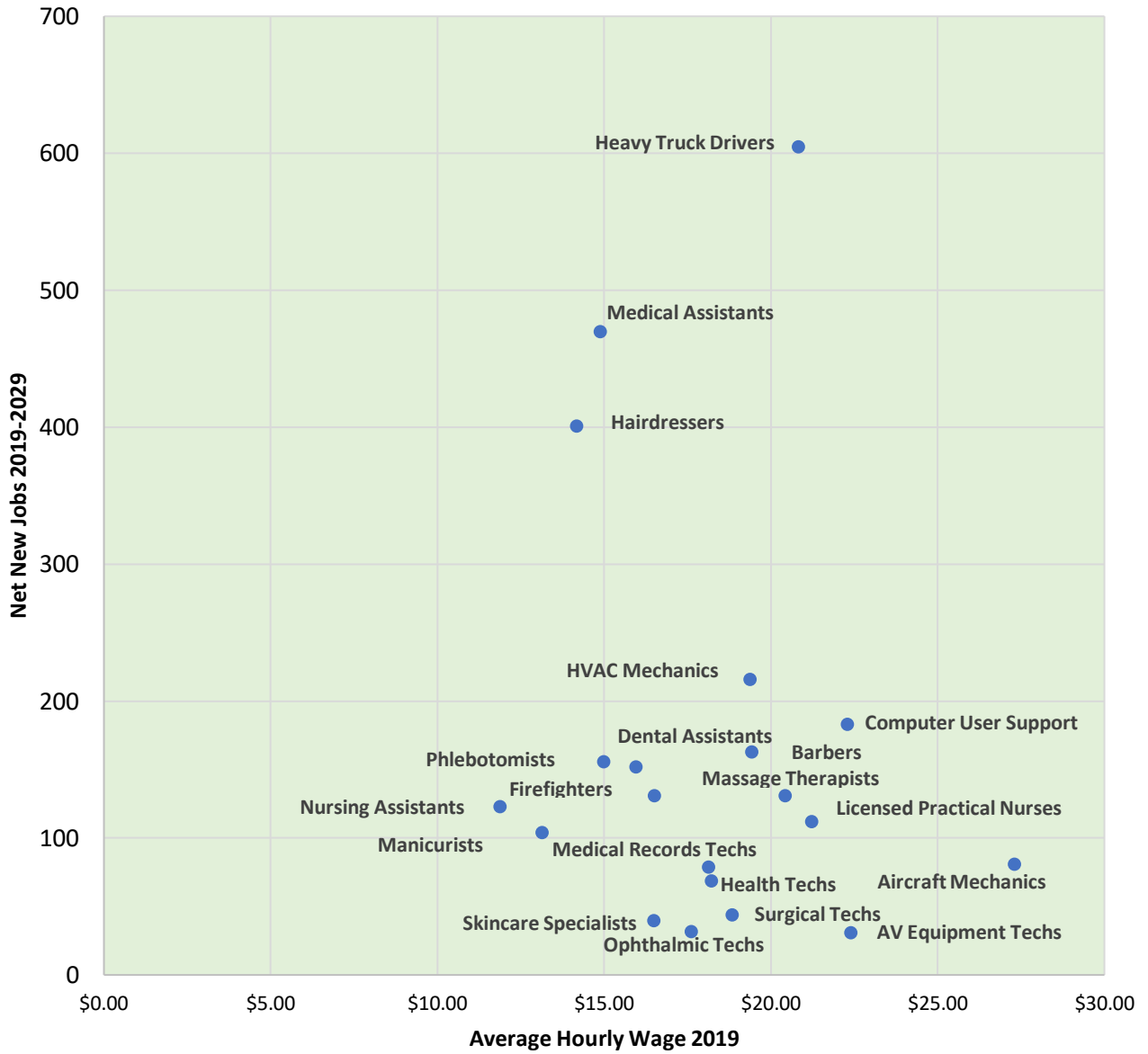
20 Largest Growing Occupation Groups



As the chart below shows, demand for Heavy Truck Drivers, Medical Assistants, HVAC Mechanics, and Computer Support will continue.

2019-2029 Occupations Needing Post High School, No Degree

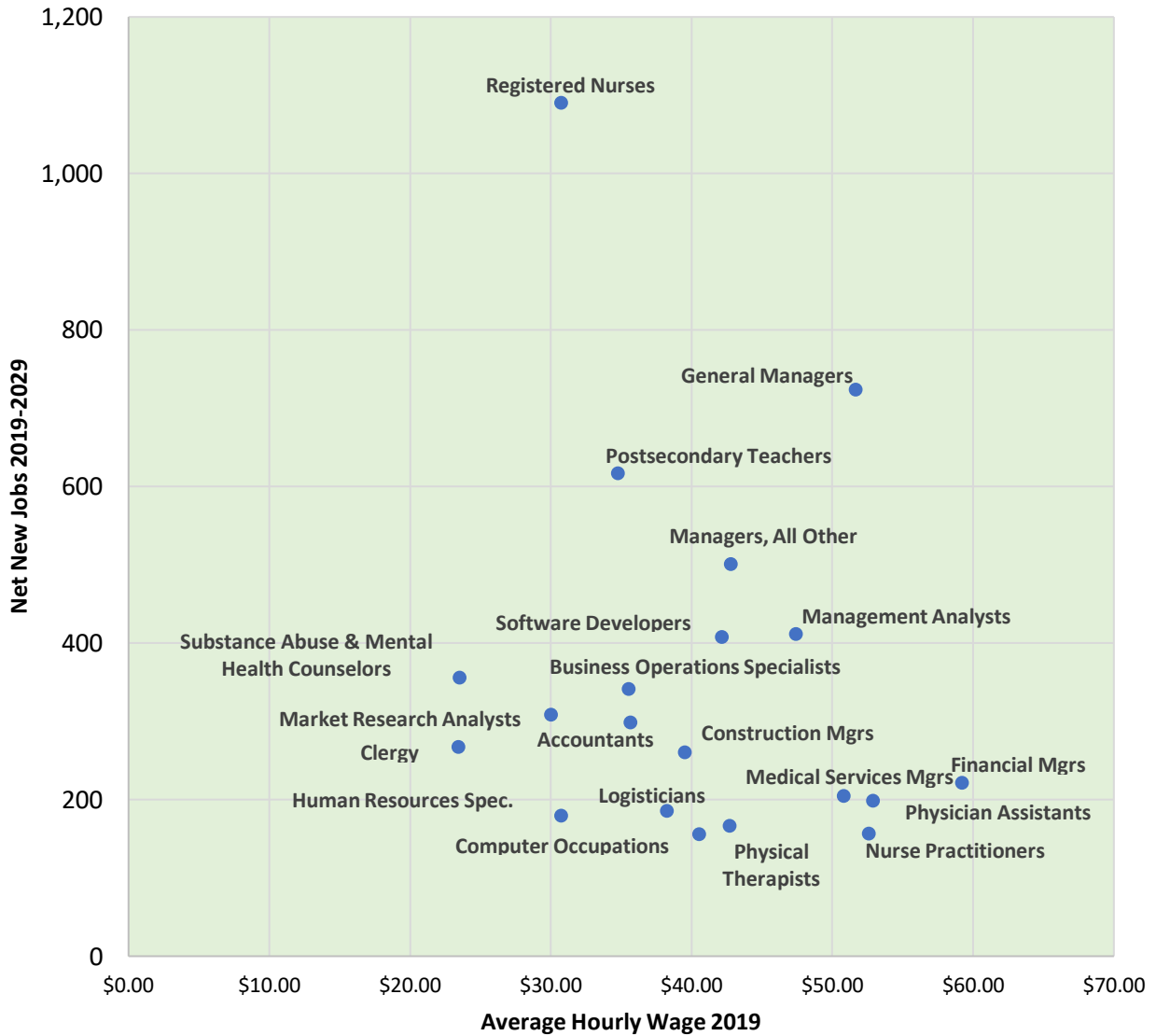
20 Largest Growing Occupation Groups



The final chart shows the growth in occupations that require an AA college degree or more. The need for new Registered Nurses (with an hourly wage just over \$30) is the clearest take-away.

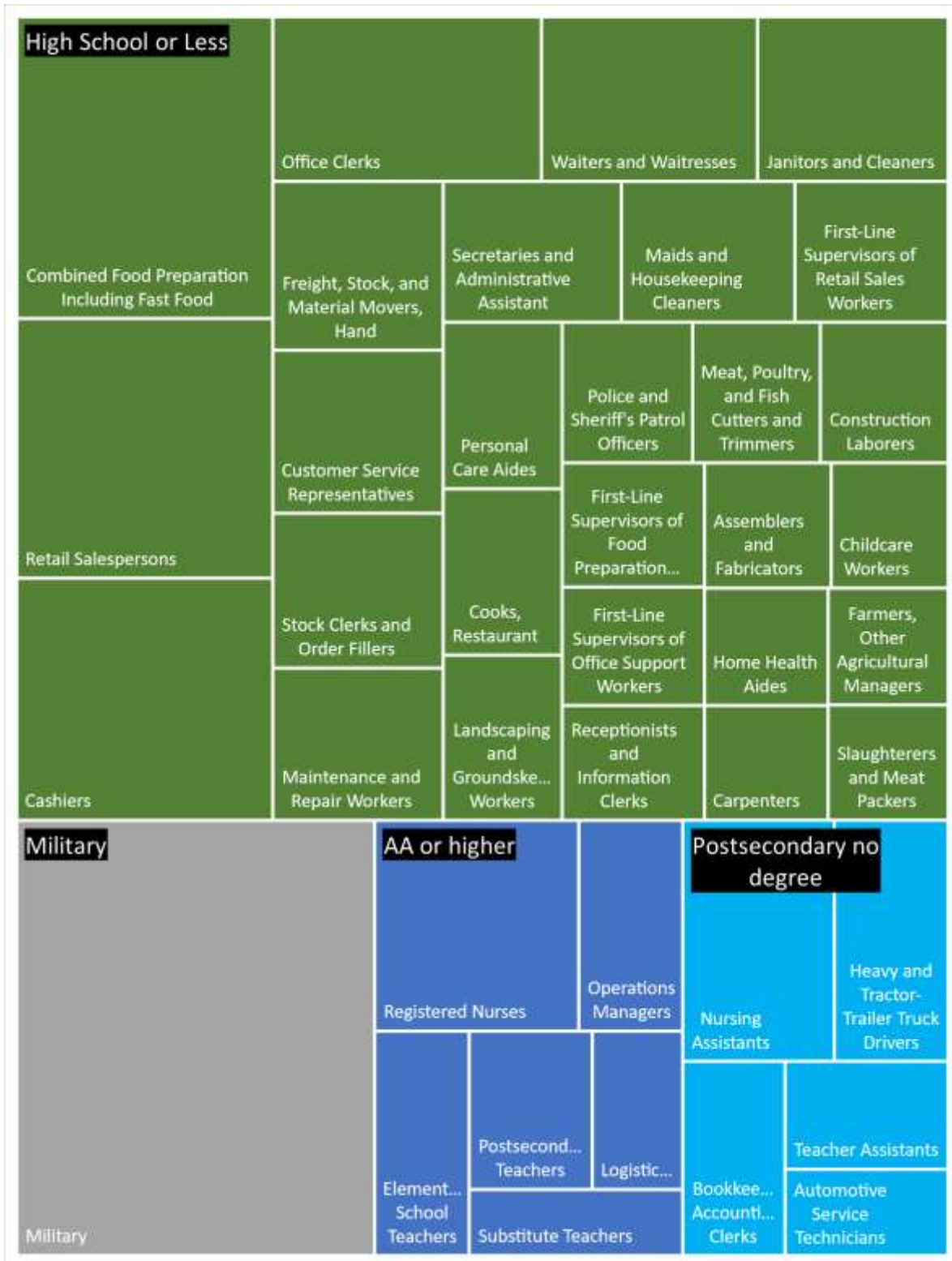
2019-2029 Occupations Needing AA or Higher

20 Largest Growing Occupation Groups



When looking at this data it is often surprising to see the lower number of jobs that require post-high school education. To visualize this relationship, below is a tree-map of the NC's Southeast Region's 40 largest occupation categories to better show the proportion and size of these job types.

40 Largest Occupation Categories by Entry-Level Educational Requirement, 2019

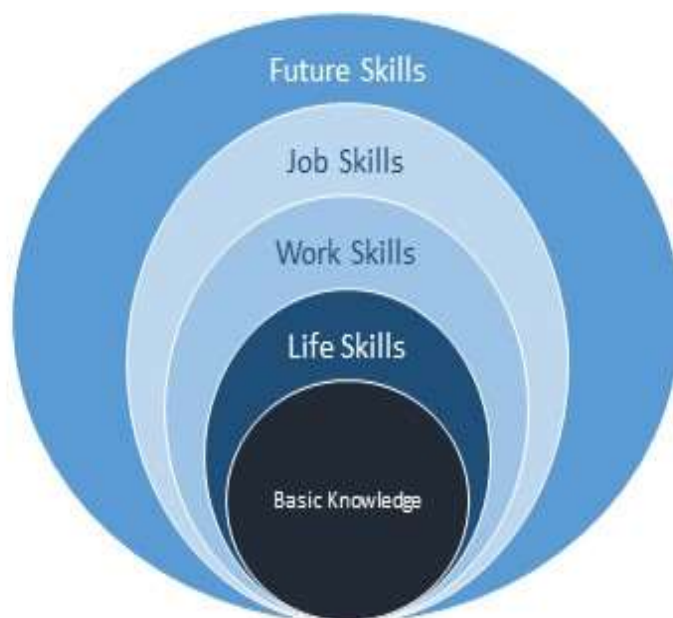


Skills in Demand

Occupation-specific skill training is not the only skill employers expect. Determining the most important skills for future work is a popular research topic although there is not a simple, universally agreed-upon list. Employers tell us that different jobs prioritize different skills. Often a specific job's most important skill or skills are determined by the overall ability of the work team, not just by the individual task.

The following breakdown, created by Economic Leadership, helps to explain the “skills gap”, and the skills that North Carolina's Southeast workers will need to successfully compete for better jobs in the future. Each tier builds upon the previous set of skills. By identifying specific skill deficiencies, specific actions can be taken to address the concerns.

Basic Knowledge is the set of core academic competencies being taught by elementary, middle, and high schools. Local districts and schools make their own decisions about curriculum, instructional strategies, materials, and textbooks. From the employers' perspective, an effective course of study would result in proficiency in reading comprehension, writing and, increasingly important, applied mathematics. Almost all jobs today, and in the future, will require these skills, and that the skill level be quantified by new assessment methods.



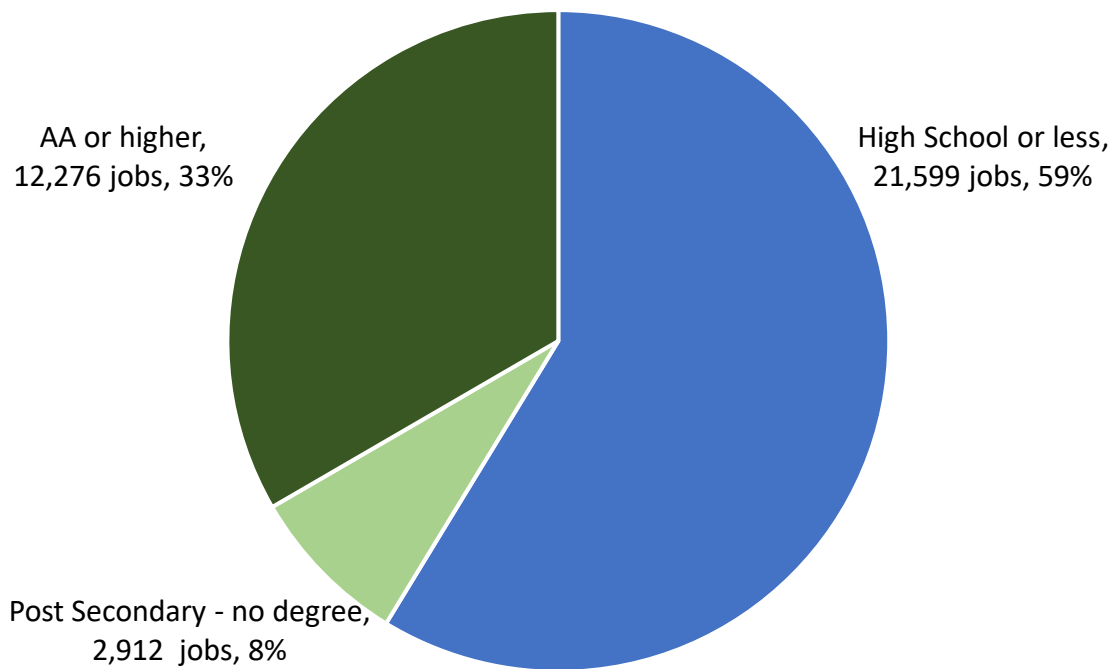
© Economic Leadership

Life Skills are made up of those personal attributes that are sometimes described as “soft skills.” They include motivation (initiative), responsibility, honesty, punctuality, personal accountability, adaptability, and conflict resolution. Often barriers to employment such as failing a drug test or having a criminal record are included in this category.

Work Skills are sometimes considered “soft skills” since many are viewed as personal traits. These skills are increasingly more important to employers, and they are also generally transferable from one job to the next. Employees with strong work skills have greater opportunities in a dynamic employment market. Today, most jobs demand that successful employees have teamwork, problem solving, flexibility, perseverance, and communication skills. Increasingly, innovation, creativity, leadership, selling and negotiation abilities are valued.

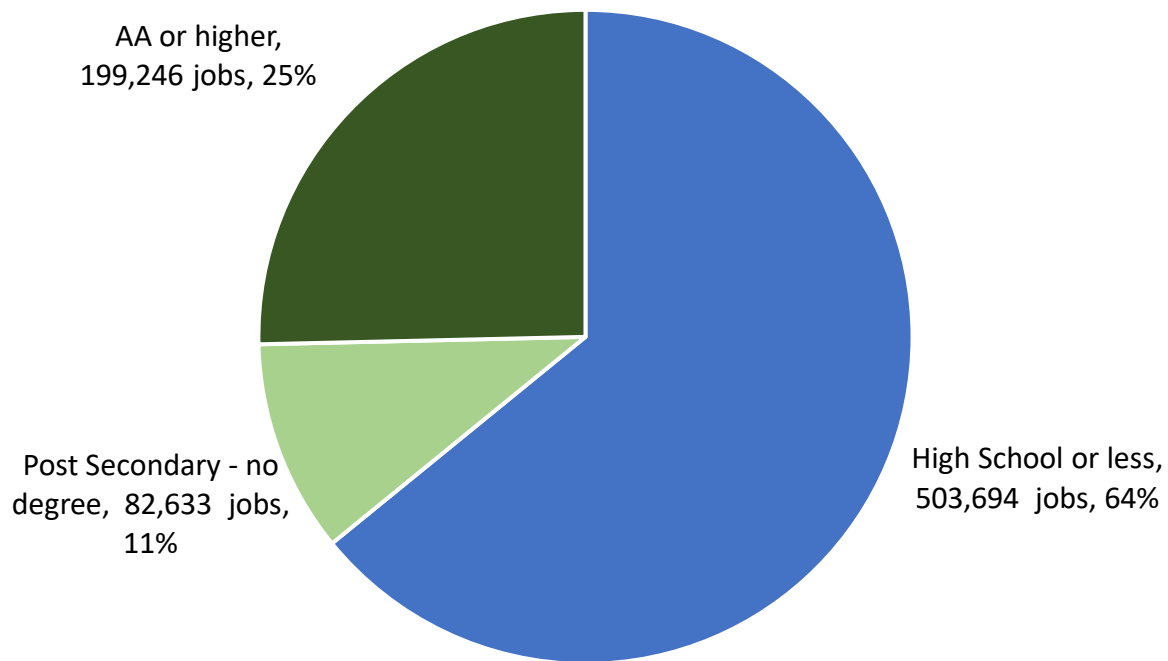
Job Skills are specific to an individual job and are reflected in the previous occupational charts. A Heavy Truck Driver or a Registered Nurse must receive specific training for the task. Higher education institutions will be the primary provider of this training, but increased exposure to sector skills can begin earlier, including in CTE classes in high school. Whether it is a degree or certificate, many employers are demanding more skills than the basic knowledge conferred by a high school diploma. For North Carolina's Southeast, EMSI projects that over 40 percent of the estimated net new jobs will require post high school training. This is higher than the current requirements and shows that the workforce skill bar continues to rise.

NC's Southeast Net New Jobs 2019 – 2029 by Education Requirement



The educational requirements needed to qualify for the region's jobs in 2029 is reflected in the chart below. About 25 percent of all jobs will require an AA degree or more, and another 11 percent will require post-secondary training.

NC's Southeast Projected Jobs in 2029 by Education Requirement



Finally, **Future Skills** are emerging as abilities that can add worth to the employee, especially in these rapidly changing economic times. Once, being able to use a computer was new. Today, the ability to use and interface with technology (including robots), manage multiple simultaneous priorities, comfortably absorb and apply data, and successfully interact with colleagues and customers of different backgrounds, are all highly valued. These skills ideally would be acquired during school years and augmented by ongoing education and on-the-job experience.

The demand side of the workforce equation continues to evolve and requires continuous monitoring through close contact and regular surveys of regional employers combined with on-going data collection and analysis.

Building a Regional Supply of Workers to Meet Demand

As stated earlier, the acquisition of workforce skills begins at birth and involves parents, teachers, and ultimately everyone that touches a person's life. For this project, the focus is on the institutions that are primarily charged with delivering education and skill training to the region's workforce.

Current Southeast Education and Training Resources

Career and Technical Education

Career and Technical Education courses are provided in all 18 county and two city school systems in the Southeast region. At the national level, CTE is made up of 16 career clusters, each one related to a specific career pathway. Each state can shape their programs to meet their projected workforce needs.

The 16 CTE career clusters in North Carolina are:

Agriculture, Food, & Natural Resources
 Architecture & Construction
 Arts, Audio/Video Technology, & Communications
 Business Management & Administration
 Education & Training
 Finance
 Government & Public Administration
 Health Science
 Hospitality & Tourism
 Human Services
 Information Technology
 Law, Public Safety, Corrections, & Security
 Manufacturing
 Marketing
 Science, Technology, Engineering, & Mathematics
 Transportation, Distribution, & Logistics

North Carolina's Southeast Region has robust CTE programs with almost 50,000 earned credentials in the most recent year.

Popular courses include office skills, construction, mechanical, medical, logistics, food processing, and public safety. A list of the courses resulting for the top ten credentials is provided for each of the region's 20 school districts in the Appendix.

About CTE

The mission of Career and Technical Education (CTE) is to empower all students to be successful citizens, workers and leaders in a global economy. CTE gives purpose to learning by emphasizing real-world skills and practical knowledge. Programs in Career and Technical Education are designed to contribute to the broad educational achievement of students, including basic skills such as reading, writing, and mathematics, as well as their ability to work independently and as part of a team, think creatively, solve problems, and utilize technology.

These tools and experiences make school more relevant, and ensure students are ready for the real world. Whether students plan to further their education in community colleges, technical schools, four-year colleges and universities, receive on-the-job training, or pursue careers in the military, CTE can be the first step in a pathway toward productive employment and citizenship.

We are proud to have 931,801 Career and Technical Education participants. The 2018 CTE Concentrator Graduation rate of 99.2% is evidence of how CTE is learning that works for North Carolina.

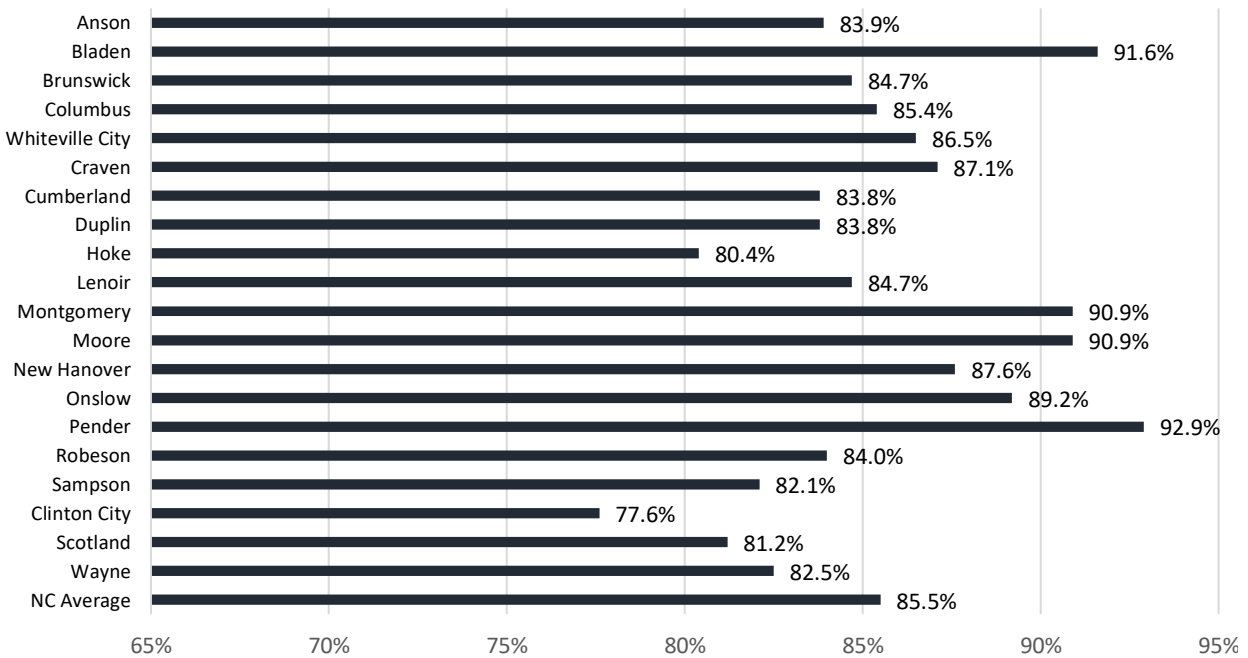
NC Department of Public Instruction Web Site

School System	Enrolled in CTE 2018-2019	Earned Credentials 2018-2019	Number of CTE Programs with Completions
Anson County Schools	867	877	22
Bladen County Schools	1,356	2,535	82
Brunswick County Schools	3,875	2,589	67
Columbus County Schools	1,379	2,070	44
Whiteville City Schools	465	443	32
Craven County Schools	2,933	2,109	57
Cumberland County Schools	10,377	5,817	56
Duplin County Schools	2,135	1,907	43
Hoke County Schools	1,313	1,271	40
Lenoir County Public Schools	1,714	951	42
Montgomery County Schools	917	1,202	54
Moore County Schools	2,603	3,679	68
New Hanover County Schools	4,487	3,007	53
Onslow County Schools	5,908	7,676	105
Pender County Schools	2,327	4,021	64
Public Schools of Robeson Co	5,404	2,541	37
Sampson County Schools	1,916	477	13
Clinton City Schools	580	262	9
Scotland County Schools	873	1,522	62
Wayne County Public Schools	3,983	4,050	69
NC's Southeast Total CTE Credentials	55,412	49,006	

While many of the jobs in the region do not require formal education after high school, a high school diploma is an important step toward a successful career. According to the Department of Public Instruction, high school graduation rates for students who were “Entering 9th Graders in 2015-16” and graduated in 2018-19 (or earlier) are shown in the table below. Eight of the 20 systems had graduation rates above the state average, and 12 were below the state average.



High School Graduation Rate 2018-2019





Higher Education

The region is home to 21 public and private universities and colleges that along with other degree and certificate granting institutions produced over 26,000 graduates this past year.

Graduations 2019

Anson College of Cosmetology	2
Bladen Community College	466
Brunswick Community College	422
Cape Fear Community College	1,894
Carolina College of Biblical Studies	46
Coastal Carolina Community College	1,518
College of Wilmington	63
Craven Community College	849
Fayetteville State University	1,218
Fayetteville Technical Community College	4,539
Grace College of Divinity	26
James Sprunt Community College	348
Lenoir Community College	1,143
Methodist University	510
Miller-Motte College-Fayetteville	396
Miller-Motte College-Jacksonville	364
Miller-Motte College-Wilmington	444
Montgomery Community College	376
Paul Mitchell the School-Fayetteville	76
Robeson Community College	582
Sampson Community College	426
Sandhills Community College	834
Southeastern Community College	395
South Piedmont Community College	538
St. Andrews University	105
University of Mount Olive	886
University of North Carolina at Pembroke	1,229
University of North Carolina Wilmington	4,745
Wayne Community College	2,091
NC's SE Region TOTALS	26,531

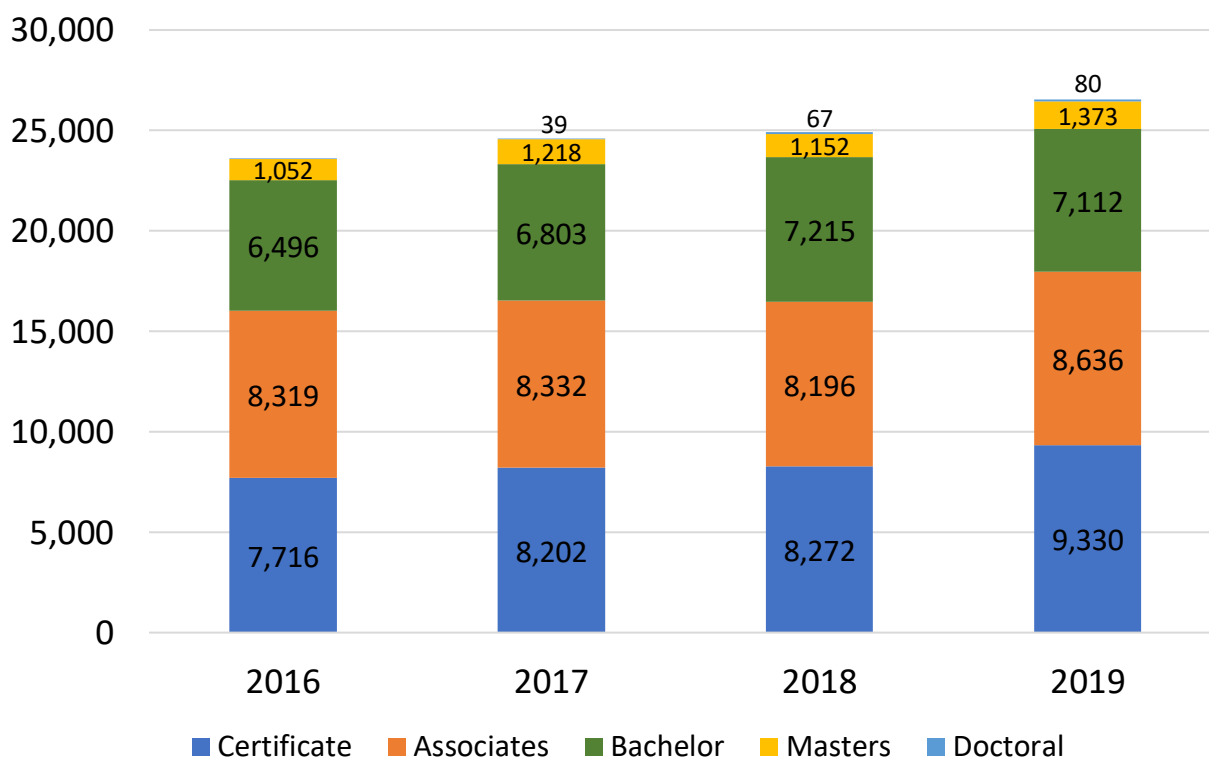
The North Carolina Community College System has been a national leader in workforce development and a significant economic development advantage for decades. Currently, the system's Align4NCWorks promotes a more responsive and aligned workforce development system by strengthening partnerships among community colleges, business & industry, workforce development boards, public schools and economic development. According to the system's web site, specific goals include:

- Increase and sustain employer engagement as part of an integrated, customer-centered workforce system.
- Connect students to quality careers and employers to quality employees.
- Ensure education and training address and validate skill and competency needs and attainment.
- Expand work-based learning opportunities.
- Improve career awareness and mapping.

- Increase opportunities for college access while keeping education and training affordable.
- Promote demand-driven and data-informed decision making and evaluation to more effectively meet workforce customer needs and enhance system accountability.
- Strengthen the foundations of success for workforce development.

Over the past four years there has been a steady increase in post-secondary education completers in the NC's Southeast Region with certificate completers growing by 21 percent, associate degrees increasing by 4 percent, and bachelor's degrees by almost 10 percent.

Southeastern Educational Completions 2016-2019



Top Certificates and Degree Subjects 2019

The top areas of educational focus represent 70 percent of the total certificates and degrees issued regionally in 2019 and align well with the previous job growth estimates.

- Health Professionals and Related 4,761
- Liberal Arts and Sciences 4,619
- Business, Management and Marketing 3,576
- Education 1,542
- Computer and Information Sciences 1,509
- Homeland Security, Law Enforcement, Fire Fighting 1,420
- Mechanic and Repair Technologies 1,180

Workforce Development Boards

According to the North Carolina Department of Commerce, local Workforce Development Boards are comprised of a “group of community leaders appointed by local elected officials and charged with planning and oversight responsibilities for workforce programs and services in their area.”

In North Carolina, the 23 local boards are responsible for the following:

- Developing local plans for the use of federally funded Workforce Innovation & Opportunity Act funds;
- Oversight of the local service delivery system;
- Coordinating activities with economic development entities and employers in their local areas.

By federal law, “The majority of each board is represented by members of the local business community. In all, board membership includes individuals representing business and industry, economic development agencies, community-based organizations, education, organized labor, public assistance agencies and more.”

Seven different Workforce Development Boards

(WDB) serve one or more of the 18 counties of North Carolina’s Southeast region.

North Carolina Workforce Development Boards



Cape Fear WDB

Brunswick
Columbus
New Hanover
Pender

Centralina WDB

Anson

Cumberland WDB

Cumberland

Eastern Carolina

Craven
Duplin
Lenoir
Onslow
Wayne

Lumber River WDB

Bladen
Hoke
Robeson
Scotland

Regional Partnership WDB

Montgomery
Moore

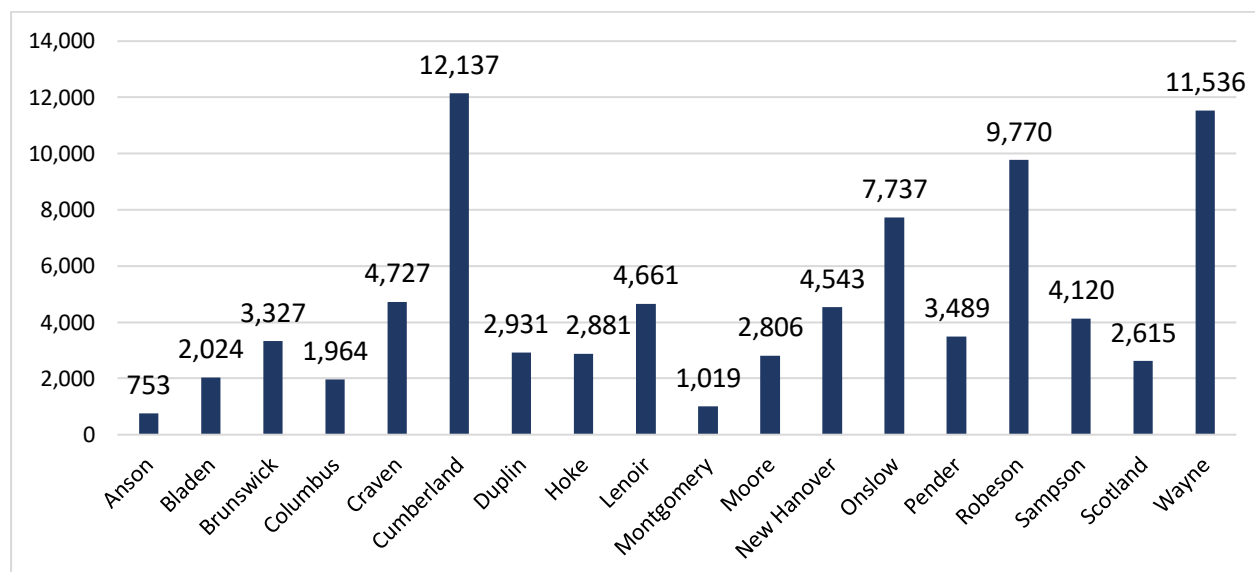
Triangle South WDB

Sampson

Each Workforce Development Board provides a unique set of support and training opportunities that contribute to overall workforce preparedness.

ACT WorkKeys

ACT WorkKeys National Career Readiness Certificates – through July 2020



NC's SE Region has 83,040 NCRC's through July 2020, while North Carolina has 515,268 NCRC's in the same time period.

Stakeholder Workforce Development Input

In interviews with stakeholders, workforce was the top competitive concern. The interviews began prior to the COVID-19 outbreak when unemployment was historically low. Many of the concerns expressed were about not having enough workers to fill current and future employer needs. The skill levels of workers was also a concern. From the interviews and focus groups, the following workforce themes emerged for the region and the organization.

Labor market data - especially about the current and future skill requirement of the region's businesses – is not readily available and is not well known among parents, students, educators, and workforce development professionals.

Employment growth is constrained by specialized skill shortages in many industries including growth industries like healthcare, construction, and manufacturing but also in industries that are not experiencing net new growth. Turnover and retirements are creating crises even in industries where growth is slower.

Increased attention is needed to the quality and job alignment of the region's Career and Technical Education offerings.

The attraction of new people to the region needs to be a part of the workforce development effort. **Talent attraction** initiatives and talent incentives have become popular nationally and should be considered in the region.

The region's workforce readily commutes across county jurisdictions with employers viewing the labor shed in terms of drive times. Workforce efforts need to be **regional, and increased cooperation** among economic developers and other service providers is a prerequisite to success.

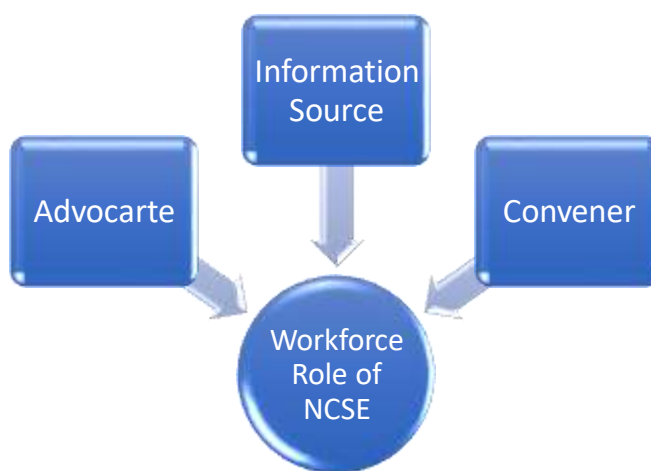
The workforce of each county in the region has different qualifications, so there needs to be a **nuanced approach to marketing and recruitment** to generate new job opportunities that align with local workforce skills.

All regional and local **Business Retention and Expansion** efforts need to include workforce quantity and quality solutions for the business.

The region's **Workforce Development Boards** could be more impactful with increased business engagement, better marketing of services, common metrics to evaluate return-on-investment, and improved collaboration with a broader group of stakeholder organizations.

The region needs to collect, publish and champion more workforce **best practices**. Some of the suggestions included a focus on workforce experience through apprenticeships and OJTs, a regional Intern Database, and a push for newer, more attractive, modern career and training centers.

Finally, despite the many suggestions for workforce development improvement there was a clear concern that North Carolina's Southeast is an organization with limited resources, and that meaningful involvement in workforce development would require significant effort and could detract from recruitment and advocacy priorities. Almost everyone interviewed believed that the organization should be a source of information, an advocate for best practices, and a convener. Almost no one recommended that the organization devote significant resources to workforce programs.



National Best Practices in Workforce Development

As workforce has become an ever-increasing competitive concern across the country, states and regions have experimented with many different program designs. This section highlights some of the state and regional programs that have been recognized as best practices. Based on the feedback from stakeholders, the best practices are grouped by themes most relevant to North Carolina's Southeast Region.

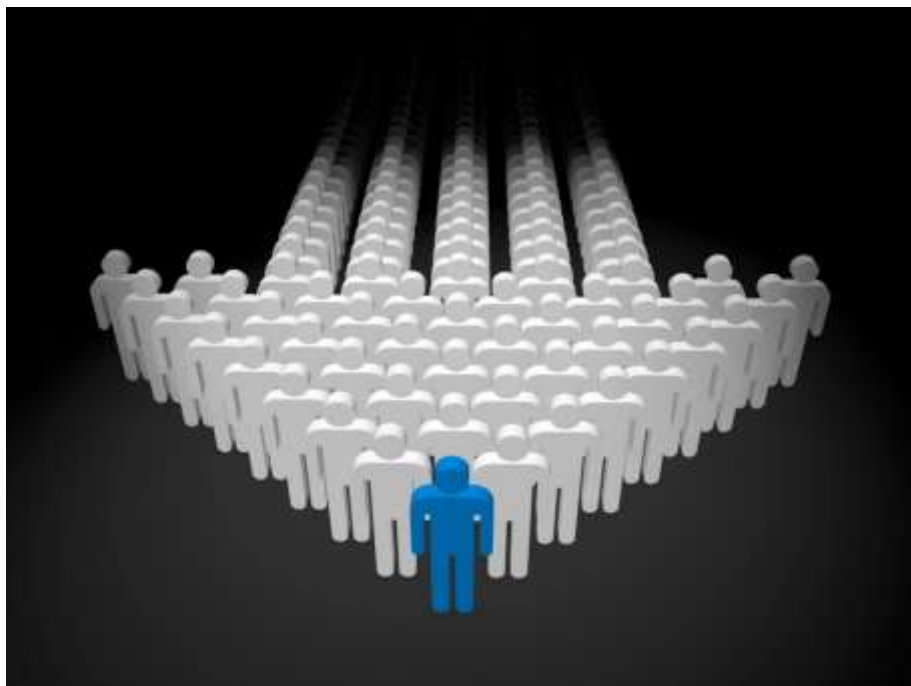
Collaboration Between Economic Development and Workforce Development

Nationally: In a survey highlighted in a 2019 report by the Federal Reserve System, 97 percent of stakeholders in the Federal Reserve's Cleveland region said that close alignment of the workforce development and economic development systems is crucial to their region's future. However, 55 percent of respondents said that in reality the two are only "somewhat aligned," with 24 percent saying, "not aligned" and just 21 percent "very aligned." Participants said that the private sector is hesitant to engage with the public workforce system because they view it as "a social service rather than a business resource." And in general, those active in either economic or workforce development "see combining efforts as an encroachment upon their territory."ⁱ



The Federal Reserve System's report noted that there are some common ways in which areas are increasing alignment of the two systems. Practices cited most often as helpful include:

- Sector-based training partnerships – 73%
- Public-private partnerships – 58%
- Sharing resources such as data, physical space, and staff – 50%
- Financial collaborations – 38%.ⁱⁱ

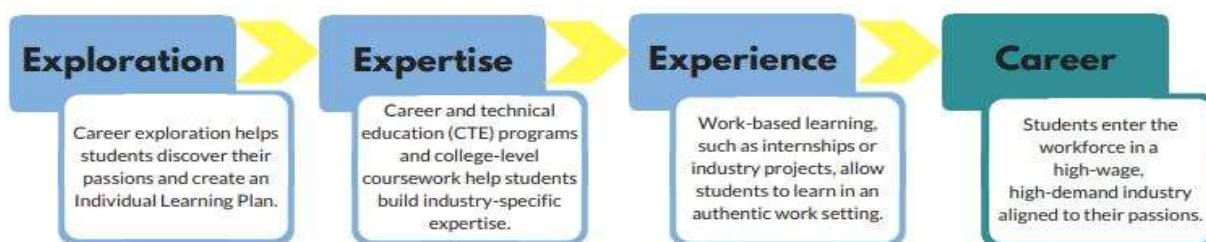


Among the main challenges preventing better alignment are: 1) the lack of a lead organization; 2) gaps in communication, data, and information; 3) differences in goals and/or funding sources; and 4) lack of support services. Having a lead entity responsible for alignment can help solve other challenges, by creating more consistent communication and use of shared data, by having broad agreement on goals and objectives, and by tapping into public and private sector funds. **The Allegheny Conference on Community Development** is a successful lead organization for workforce and economic development in the Pittsburgh area, operating as a non-profit community leadership group since 1944.ⁱⁱⁱ

Work-Based Learning, Career Paths & Career Awareness

Rhode Island: **PrepareRI** was launched in 2016, as a partnership of the state government, private industry, the K-12 public school system, universities, and non-profits. The initiative is based on the premise that all young people “will need some form of postsecondary credential and practical work experience to be successful.” Among PrepareRI’s near-term goals are: 1) all career pathway programs will be aligned to high-demand careers in Rhode Island, and 2) all students will have access to a work-based learning experience, such as an internship in a relevant field.

The PrepareRI Model



The PrepareRI Internship Program offers paid summer internships for high school juniors. Students are matched with internship opportunities by the non-profit Skills For Rhode Island’s Future, whose partners include the Greater Providence Chamber of Commerce. Interns are paid \$11.25 per hour, can work up to 240 hours, and receive work readiness skills training.^{iv}

West Virginia: The state’s **Simulated Workplace** initiative turns classrooms into student-run business environments. Student teams create their own businesses and learn punctuality, workplace safety, and technical skills. Team projects are evaluated onsite by regional business owners. Simulated Workplace was created in 2013, and by 2015 was used in over 500 classrooms impacting more than 13,000 students. Simulated Workplace is one reason why West Virginia was hailed in a 2017 New York Times article as “leading the way in transforming vocational education.” Thirty-seven percent of seniors in the state completed a technical education program in 2016, compared with 18 percent in 2010.^v

Alabama: School guidance counselors are generally spread too thin to offer useful career guidance, and usually lack the training to do so. As a result, separate career coaching programs are growing in importance. In Alabama, regional **Career Coaches** are responsible for networking with businesses in their region and preparing workforce demand reports, particularly for use in high school CTE programs. Career coaches also provide employability skills training and arrange job shadowing and industry tours. Alabama now has 93 career coaches based at the state's workforce centers who are serving 366 schools.

Virginia: In rural southwest Virginia, **United Way's Ignite Program** takes a "cradle to career" approach to talent pipeline development. Ignite brings career awareness tools to every middle school and high school in the area, including a) self-exploration and career planning software; b) classroom talks and regional employer tours; and c) a career expo for seventh graders. Ignite also provides a full range of skill development tools, such as project-based learning modules, and soft skills curriculum, and operation of a summer internship program.^{vi}

Arkansas: In Bentonville, the **Ignite Professional Studies** program gives students "post-secondary options aligned to their passions and strengths" in their own community. Bentonville Ignite provides workplace experience and business mentors in eight career strands including Construction Management, Health Services, and Technology.

Skills Development

Pennsylvania: The state launched **Manufacturing PA** in 2017 to support workforce development in manufacturing, the state's third-largest industry sector. Program components include **Training-to-Career Grants** made to community colleges, technical and trade schools that collaborate with two or more regional manufacturers. The goal of the grant program is to increase the "essential skill" attainment of entry-level applicants. In addition to training, eligible expenses include equipment purchases and internship placements.^{vii}

Virginia: The state put \$12.5 million into the first two years of the **New Economy Workforce Credential Grant Program**, which began in 2016. The New Economy grants fund training that leads to a credential in an occupation on the "Virginia Demand Occupation" list. The average age of participants is 36, and most have had no previous college experience. In 2018 the Virginia General Assembly allocated \$19 million to the program for the next two years.^{viii}

Kansas: The state's **Excel in CTE** program started in 2012, providing tuition for high school students to take technical courses at the state's technical and community colleges. In 2013 it was named one of the "Top Ten Innovations to Watch" by the Brookings Institution.^{ix} Between 2013 and 2019 student participation increased by 124 percent, college credits by 138 percent, and credentials earned by 154 percent.^x

Sector-Based Strategies

Georgia: When the state Department of Economic Development met with businesses and economic developers about 10 years ago, they heard that the number one factor in most expansion and new location decisions was the availability of a skilled and educated workforce. In 2014, then Governor Nathan Deal established the **High Demand Career Initiative (HDCI)**. HDCI convened the Department of Economic Development, the state's university system, its technical college system, and more than 120 employers from around the state.



Georgia used \$3 million from WIOA Governor's Reserve Funds to offer capacity-building **HDCI Sector Partnership Grants** of up to \$250,000 for each of 12 regions across the state. To apply, regions had to build a coalition with at least five employers in a key sector, postsecondary schools in the region, the K-12 school system, state workforce-related agencies, the chamber of commerce, and preferably non-profit organizations and other support service providers. Regions also needed to meet a 10 percent match requirement.^{xi}

Within Georgia, a great example of a regional sector strategy is **Floor360**, which supports the carpet industry in northwest Georgia. This largely rural part of Georgia accounts for about 70 percent of the world's carpet production. Updated manufacturing processes created the need for advanced skills in the workforce. In 2014 the region obtained a U.S. Economic Development Administration grant to implement the Northwest Georgia Regional Advanced Manufacturing Strategy. Among Floor360's concrete successes is an expanded campus for Georgia Northwestern Technical College with a new flooring training center. State government contributed over \$20 million for the project, and the industry donated most of the equipment. An inland port with rail access to the Port of Savannah has also been established in the region.^{xii}

Kansas: The creation of a **multi-region workforce plan for two key industry sectors in northeast Kansas** is a noteworthy example of going beyond regional and even state boundaries to increase collaboration. **KANSASWORKS** Local Areas II and III agreed in 2017 on a plan to support the important Life Sciences (especially animal health) and Health Care sectors. It identified an animal health corridor that stretches from Manhattan, KS to Columbia, MO. Among the plan's aims are to create a workforce strategy around the opening of the National Bio and Agro-Defense Facility in Manhattan, and to forge closer ties with the Kansas Hospital Association.

Apprenticeships

Alabama: One state heralded for its apprenticeship programs is Alabama. To expand the number and variety of apprenticeships, the state created an **Alabama Office of Apprenticeship (AOA)** in 2019. Some highlights of Alabama's approach include:

- Legislation creating the Alabama Industry-Recognized and Registered Apprenticeship Program (AIRRAP) was passed in 2019, ensuring that



one agency – the AOA – will be accountable for both major types of apprenticeships across the state. Since 2016, Alabama provides employers an **Apprenticeship Tax Credit**, and has expanded the per-apprentice credit and the number of apprentices for which a business can claim the credit.

South Carolina: Another highly regarded state system for Registered Apprenticeships is **Apprenticeship Carolina**, operated by the South Carolina Technical College System. The system recently had over 34,000 apprentices in more than 1,000 federally registered programs, and over 200 youth apprenticeship programs. All 16 technical colleges participate, and all 46 counties of the state have participants.



Within South Carolina, the Charleston region and Trident Technical College are standouts for both adult and youth apprenticeships. Major employers such as Bosch, Boeing, and Volvo have found the programs valuable. Bosch notes that retention of employees who completed an apprenticeship is five times greater than for external candidates, and that the average tenure of a skilled trade employee at its Charleston facility is 17 years.^{xiii}

Colorado: The **CareerWise Colorado** initiative, started in 2016, has an ambitious goal for advancing youth apprenticeships: 20,000 youth apprenticeships within ten years. Like the Charleston, SC region, CareerWise Colorado is part of the national **Partnership to Advance Youth Apprenticeship**. CareerWise borrows from the Swiss apprenticeship model. Three-year apprenticeships start in the junior year of high school and are available in five major industry sectors. Funders include the Gates Foundation, JPMorgan Chase, the Walton Family Foundation, and United Healthcare.

North Carolina: Around the country, more community colleges are serving as the **official sponsor of Registered Apprenticeships**. Having a community college as the sponsor of record relieves employers of some of the administrative and regulatory burden. In North Carolina, community colleges serving this role include Gaston College and Alamance Community College.

Talent Retention and Attraction

Wisconsin: The state has invested significant money, \$6.8 million, in its **THINK•MAKE•HAPPEN** talent campaign. Strategies include targeting young professionals in nearby metropolitan areas like Chicago, reaching out to alumni of Wisconsin universities, and visiting U.S. military bases around the U.S., and the world, to meet military personnel leaving active duty and promote work opportunities for them in Wisconsin.

At the regional level, a group of small cities and businesses in Wisconsin's Fox River Valley collaborate to recruit graduates of colleges and universities around the Midwest. The Fox Cities Regional Partnership annually hosts a three-day **Talent Upload** tour to introduce students with in-demand majors to the region's culture, amenities, and career opportunities.

Arkansas: The Northwest Arkansas Council, a regional private sector led group, developed the **Finding NWA** program to help businesses deliver information on the region's quality of life, recreation, and entertainment options to out-of-state job candidates. Northwest Arkansas also hosts a **Young Professionals Summit** annually, with a goal of retaining and developing young talent.

Missouri: The Springfield, MO Business Development Corporation won a 2017 award from the International Economic Development Council for its **Talent Attraction Initiative**. The Springfield organization has created an extensive video library including career-focused videos highlighting the depth and breadth of job opportunities in information technology, engineering, and medical careers.^{xiv} Another set of videos is aimed at attracting young professionals.

New Hampshire: The small Lakes Region of New Hampshire, about two hours north of Boston, has a very high median age. In 2013 the Belknap Economic Development Council began a campaign to attract young people, particularly natives who have left the area. The campaign uses social media, a revamped website with a "**Meet Our Young Talent**" section, and radio ads.

Increased Workforce Participation by Special Populations:

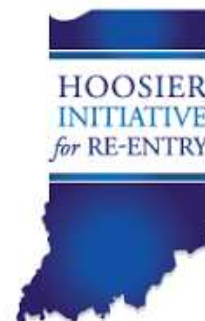
Ex-Offenders and Disconnected Youth

Ex-Offenders

A history of incarceration reduces an individual's annual earnings by 40 percent. Only six percent of the prison population in America has any post-secondary degree, compared with about 37 percent of the general population.^{xv} Increasingly, states, community colleges, and businesses are developing training, work experience, and support service programs to boost the prospects of workplace success by ex-offenders.

Indiana: **The Hoosier Initiative for Re-Entry (HIRE)** started in 2012 and is run by the state's Department of Corrections and the Department of Workforce Development. The HIRE model prepares inmates with a felony conviction in three areas:

1. Hiring process skills, workplace readiness training, and financial literacy.
2. Outreach to area businesses for job placement.
3. Coordination with support organizations that can assist with clothing, housing, and transportation.



A mentor works with each HIRE participant for one year after an initial job placement. In a recent year, the HIRE program placed over 2,200 ex-offenders in jobs, with a three-month retention rate of 97 percent. Participants also have lower recidivism rates.^{xvi} In 2018 the Indiana HIRE program won an award from the National Association of State Workforce Agencies.^{xvii}

Texas: Lockhart Correctional Facility, a state prison for women located south of Austin, Texas, partnered with Austin Community College to begin an in-house **Certified Production Technician** program for inmates. Fourteen women graduated in the initial class in August 2019. Funding sources include Workforce Innovation & Opportunity Act (WIOA) funds and Workforce Solutions Rural Capital Area, a regional workforce board. This is the first time that Austin Community College has partnered with a prison in its region.

Washington: The **Trades Related Apprenticeship Coaching (TRAC)** program in the State of Washington helps prepare women for skilled trades work as a carpenter, iron worker, mason, or laborer. Participants must have a high school diploma or GED. Graduates of the 16-week, 460-hour program get preference for placement in union trade apprenticeships. TRAC also partners with non-profits to help women get the work tools and clothing they need. The program is small – with about 300 graduates since 1997 – but has been expanded to a second women's prison in Washington. According to the state corrections department, graduates re-offend at a rate one-tenth that of other female offenders.^{xviii}

Disconnected Youth

Arkansas: YouthBuild in Little Rock targets young people 18 to 24 years old. Seventy-five percent of participants are high school dropouts, and 25 percent are lacking in basic skills. **YouthBuild's Education and Occupational Skills** component operates for 32 weeks of the year, with content comprised of 50 percent in academics; 40 percent in occupational skills; and 10 percent in community service and leadership development. In addition to career pathways in construction, nursing, and commercial driving, YouthBuild has added paths for home health care and industrial technician certifications.

North Carolina's Southeast Marketing Target Analysis

Opportunity in economic development marketing can be defined as the set of circumstances that makes it possible to interest potential companies to invest. Many techniques can be used to identify the best marketing opportunities for a region. Marketing funds are limited, precious and need to be used efficiently. This analysis is designed to identify marketing targets with the highest probability of success for North Carolina's Southeast Region.

Current marketing materials describe the region as "a highly unique and competitive economic region because of its diversity of assets, including:



- International port (Wilmington, NC)
- Four of the largest military installations in the world
- One of the most productive agricultural bases in the nation as ranked by Farm Futures Magazine
- More than 21 institutions, including six top universities and fifteen community colleges.
- Three interstate highways."

Opportunities for growth in the Southeast are a combination of (1) the expansion of existing Southeast firms or their supply networks, (2) the relocation of investment from somewhere else, domestic or international, to the region, or (3) new facilities to increase capacity and accommodate growth. Identifying the best marketing targets is therefore a combination of identifying companies in sectors that are expected to grow, companies that are part of existing regional firm supply chains, and companies in industries where the region might have a competitive advantage.

This analysis is being conducted during the COVID-19 pandemic, which over the past few months has dramatically reduced national and regional gross domestic product, and increased unemployment from historic lows to historic highs. The COVID-19 pandemic has brought a new level of uncertainty to future business growth. Industry trends are likely to be upended, with lasting damage to some industries, and others experiencing unpredicted growth. Incorporating the best post-pandemic thinking into this analysis is necessary, but many of the drivers of place-based business competitiveness will be the same post-pandemic.

Successful regions will still be analyzed by companies and site selection professionals based on the business climate, cost structure, labor quality and availability, infrastructure, and access to suppliers and customers that businesses need to prosper. Successful communities will have good shovel-ready sites and high-quality buildings ready for occupancy. The major changes from COVID-19 will be the impact on specific business sectors, the viability of individual companies and changes in supply chains and logistics. Reduced globalization and lower foreign direct investments are expected due to global trade tensions and the pandemic. Re-shoring or Near-shoring of critical manufacturing is likely.

COVID-19 aside, few would dispute that we have been experiencing rapid economic shifts and significant industry disruption. Technological advancements combined with consumer and lifestyle changes have resulted in the rise and fall of companies and entire industry sectors. Almost everyone predicts that the pace of change will continue to accelerate. Opportunistic economic development organizations will have their eyes on the horizon.

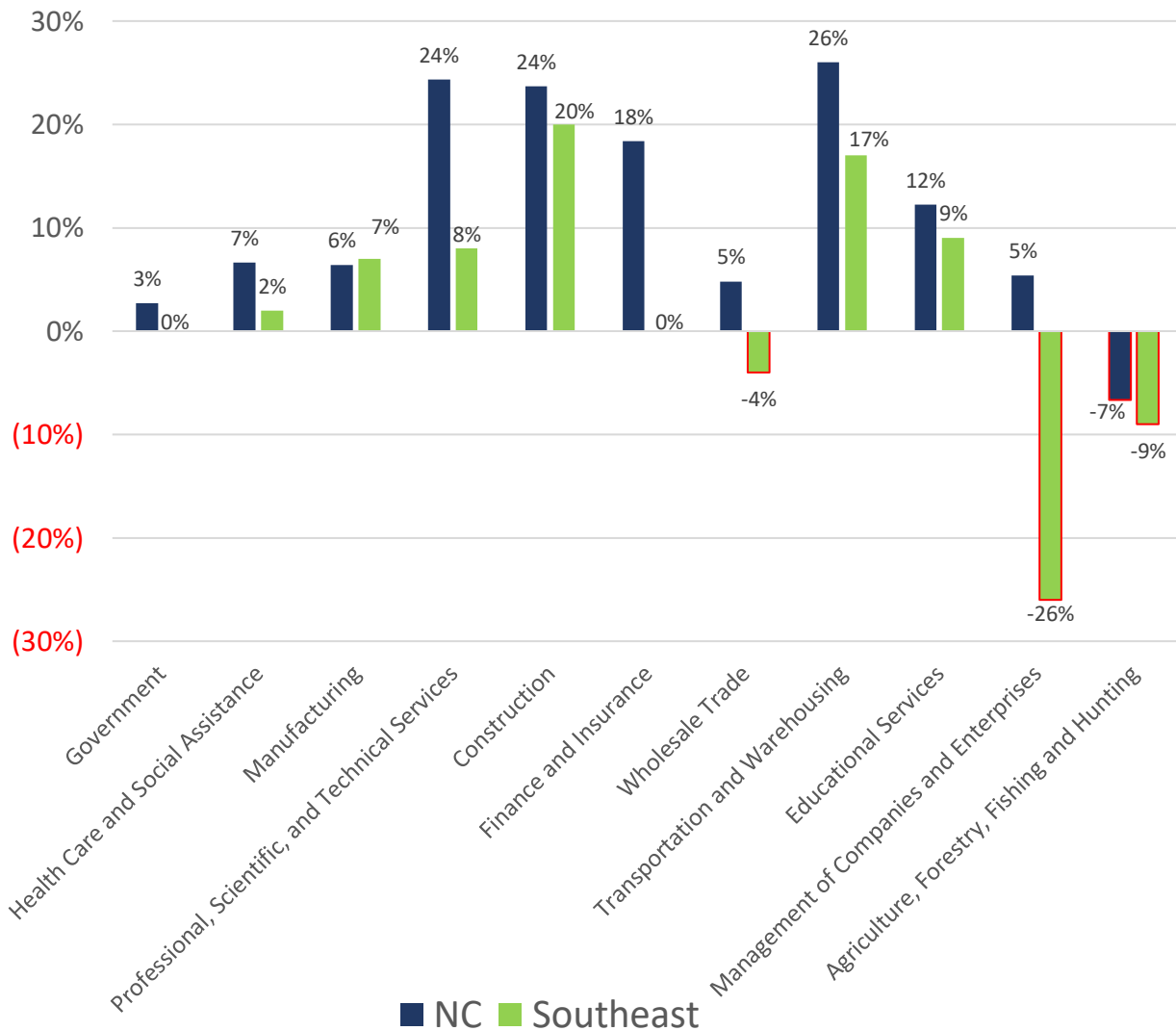
Over the past five years the national economy has experienced steady growth, adding over 11 million jobs. **An initial examination of growing industry sectors nationally (by three-digit NAICS codes) reveals that while there has been strong overall growth from 2014-2019, it is decidedly uneven. The industries that have historically been important to North Carolina's Southeast reflect the differences.** Nationally, textile mills, apparel production, and paper manufacturing have continued to shed jobs, while food and beverage manufacturing, transportation equipment, plastics and rubber, and wood products have grown, combined adding close to a half million net new jobs.

Industry	Net Job Gain 2014-2019
Transportation Equipment Manufacturing	171,636
Food Manufacturing	144,747
Beverage and Tobacco Manufacturing	75,451
Plastics and Rubber Manufacturing	59,698
Wood Product Manufacturing	39,693

In addition to these Manufacturing sub-sectors our country has experienced significant job growth in Professional, Scientific and Technical Services (+1,251,622), Ambulatory Health Care (+1,032,370), and Warehouse and Storage (+468,951).

North Carolina's strong economy produced significant job gains over the past five years. Strong gains in white collar sectors such as Professional, Scientific and Technical Services and Finance and Insurance continued to consolidate in the state's largest urban areas. Yet growth in Manufacturing, Transportation and Warehousing, and Construction were more distributed across the state. **The Southeast saw 20 percent growth in Construction jobs, 17 percent growth in Transportation and Warehousing, and outperformed the state with 7 percent growth in Manufacturing jobs.**

Percentage Job Change 2014-2019



While economically interconnected through shared labor pools, common infrastructure and educational assets, the region's eighteen counties have distinct economic drivers. **Over the past five years 15 of the 18 counties have experienced manufacturing jobs growth, but the specific**

industry producing the highest net new jobs in each county varies. In three counties it is **Manufacturing**, but for others it is **Government, Health Care, Transportation and Warehousing or Construction**.

To determine recommendations for targets to generate investor prospects we used a four-step process.

- 1) Sector concentration and recent employment growth mapping
- 2) Review of existing targets and expected trends
- 3) Identifying sector requirements and local strengths
- 4) Supply chain leakage analysis

Sector Concentration and Employment Growth Mapping

A closer examination of North Carolina's Southeast counties reveals its current industry mix, recent job history, and projections for the next five years. The targeting focus will be on industries that serve a broader market and bring wealth from outside into the region.



These industries typically represent about one third of a community's jobs while the other two-thirds are generated from the indirect impacts of spending from the primary wealth generators. This analysis will not examine companies that primarily serve the local market.

To analyze North Carolina's Southeast industries, we collected employment and wage data for over 680 six-digit NAICS code industries. These industries were then grouped into 53 standard industry groups, closely related to those used by the Harvard Business School Mapping Project (a full listing is included in the appendix section).

In the initial analysis, the concentration and recent employment growth of industries is used to determine their significance as potential marketing targets. Location quotients (LQs) are a measure of employment concentration. LQs are the level of an industry's employment in the region compared to national employment levels. A location quotient of 1.00 or greater

demonstrates a higher concentration than what would be expected based on national levels. This can reveal what industry groupings are most important to NC's Southeast and the generation of money from outside of the region through exports. This type of analysis can also shed light on previous business evaluations of the region's suitability and competitiveness for that specific industry.

Example Chart for Industry Mapping

As the quadrant map below shows, Location Quotients, when mapped alongside employment growth can show which industries are thriving or declining. The chart demonstrates where an industry is positioned, and how it corresponds to its LQ strength and growth. The position on the map does not alone determine what would be a good marketing target, but it does allow industries to be visually grouped and compared.



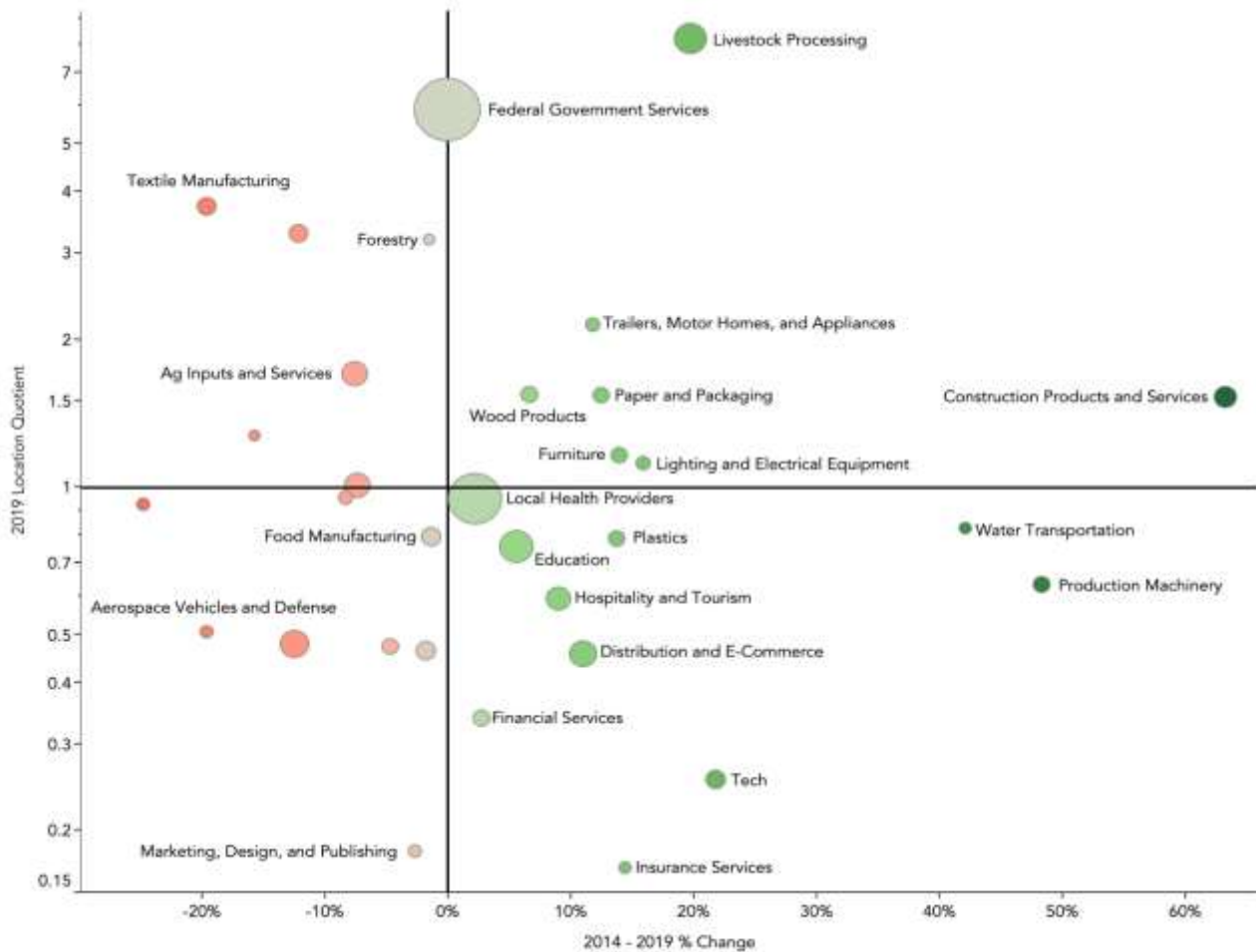
Industry mapping for NC's Southeast for the past five years reveals a dynamic and diverse economy. While the military (federal government services) is by far the largest employer, 17 other industries are also more concentrated in NC's Southeast than the national level. Nine of these 18 strength industries saw employment grow in the last five years, while the other half experienced a net decline in employment.

Textiles, agricultural inputs, and forestry are some of the important legacy industries in the region. They have traditionally been a key part of the region's economy but have experienced consistent employment declines. Many factors have contributed, including globalization and automation. This does not diminish their economic importance to the region but does reduce the expectation of strong future job growth.

Many smaller employment industry groups have been growing in the region. Livestock processing was the most concentrated area with an LQ greater than 8.0. Livestock processing also had a strong employment growth rate of 20 percent in the last five years. Construction products and services ranked as an asset industry with one of the highest growth rates. Strong growth in power and communication line construction, as well as an uptick in industrial building construction, were contributors. Water Transportation was another emerging area; this industry added over 360 jobs in boat building and marine cargo handling. Tech, Distribution and E-commerce industries also had strong levels of growth.



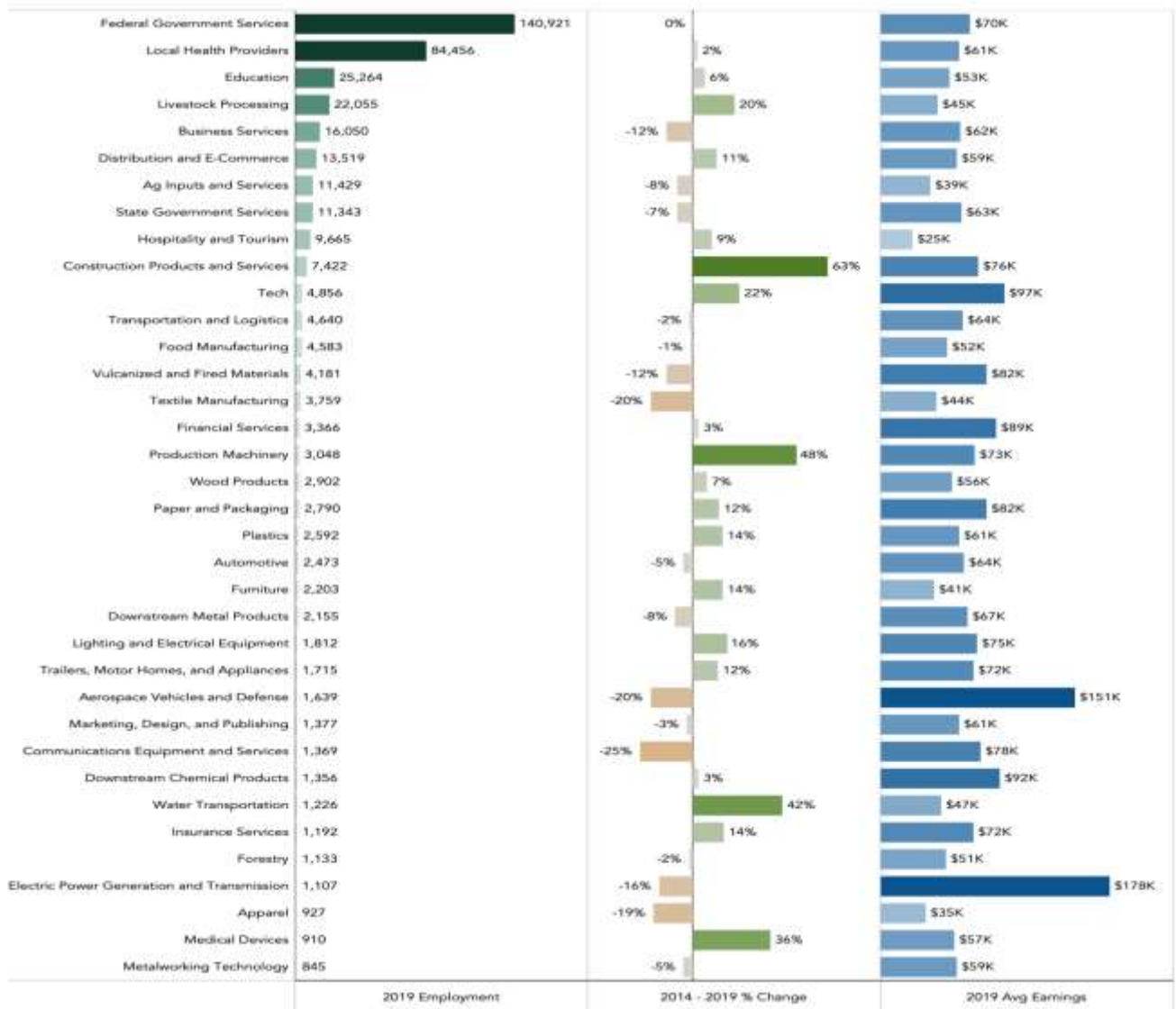
North Carolina Southeast Industry Sector Map



Note: The size of each industry bubble is determined by the size of 2019 employment levels. The color of each industry is determined by the employment growth from 2014 to 2019. Industry sectors with fewer than 1,000 workers were removed from the chart.

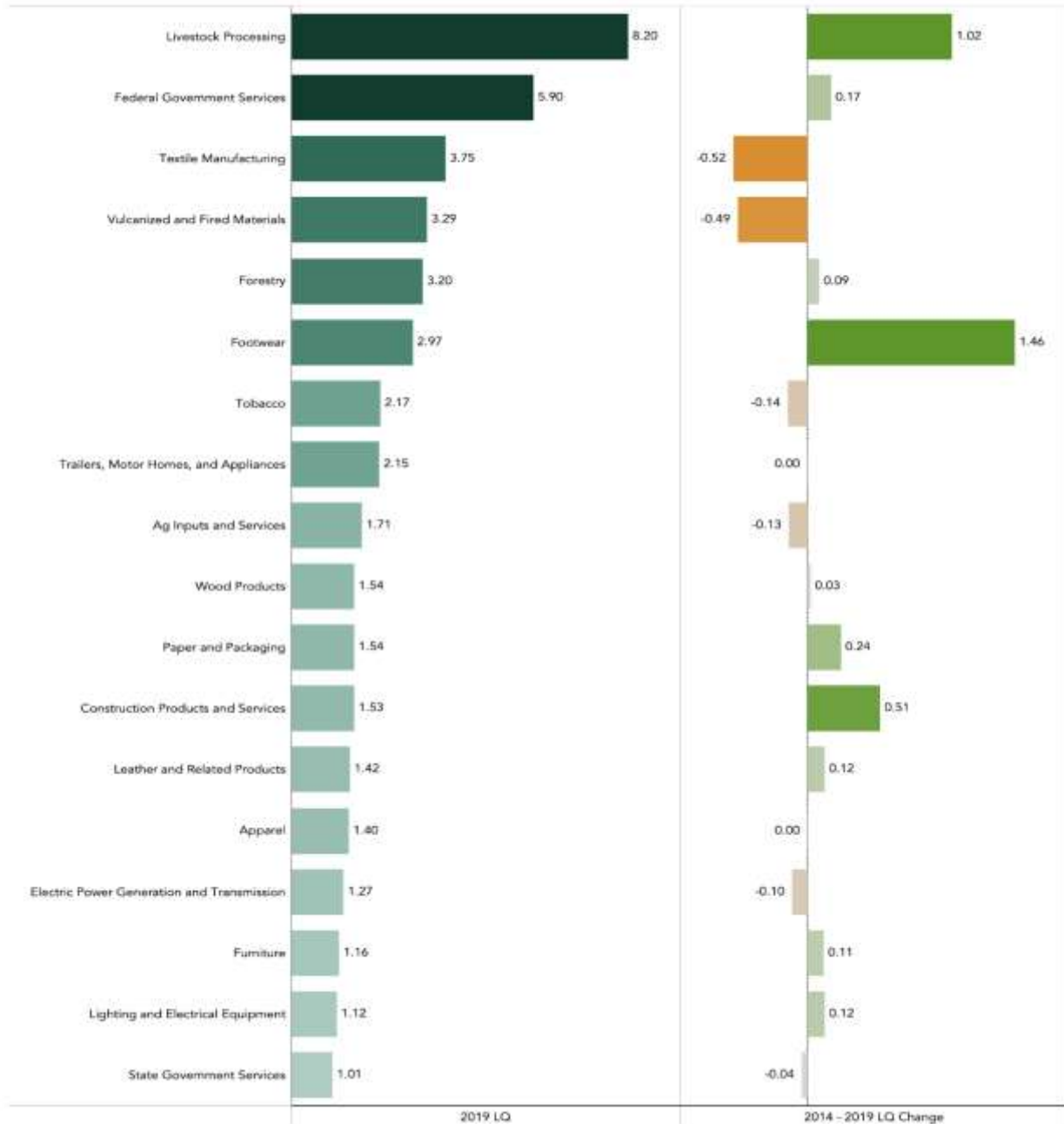
The federal government is, by far, the leading employer in the region. No other sector comes close to the military employment levels in NC's Southeast. Average annual salaries are \$70,000. Education and knowledge creation is another top employer, along with health providers, livestock processing, and business services. **Of the top ten employing industries, six experienced a net employment increase in the last five years.** As the following chart shows, average earnings per worker vary greatly by industry. Some top NC's Southeast industries like Hospitality and Tourism, Agriculture, and Textiles have lower wages - none averaging more than \$45,000 in annual earnings.

Top Industry Sector by Employment in NC Southeast

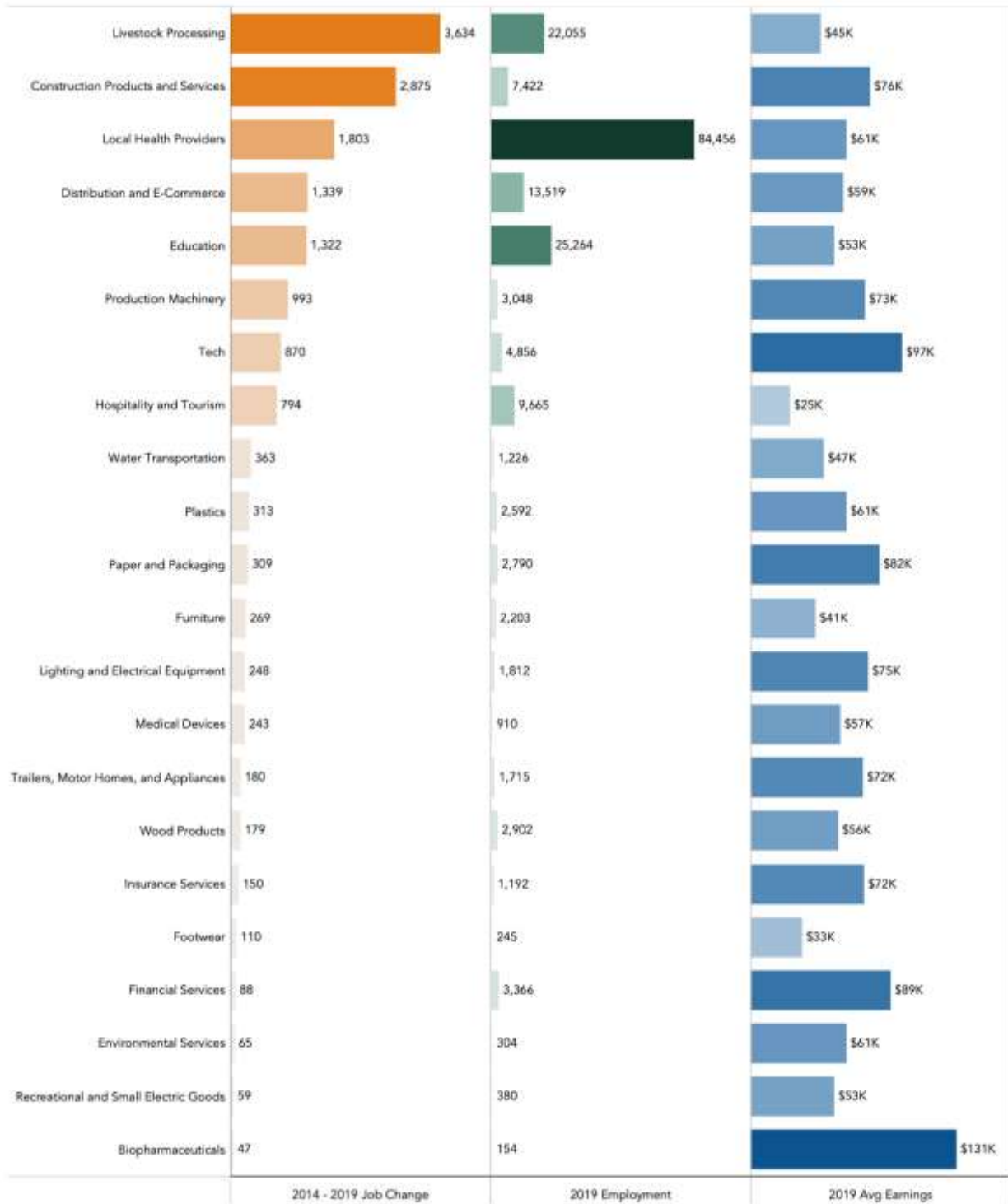


Looking at LQs and their rate of change, some of the lower employing industry sectors still have unique concentrations in the region. Forestry, for example, employs over 1,100 workers, but has a concentration over three times the national average. For some industries like apparel, the net job change was a loss, but this was consistent with the national trends and thus the LQ was unchanged.

Top Concentrated Industries, By Location Quotient, in NC's Southeast



Fastest Growing Industries in NC Southeast



Looking at the raw change in job numbers, **Livestock Processing added the greatest number of jobs in the last five years with over 3,630 jobs added.** The industry is a top employer, and top concentrated industry sector, in the region. Average earnings are \$45,000 a year. The next top job-adding industry was another asset sector for the region, Construction Products and Services, including building materials. **Local Health Providers added 1,800 jobs to an already large workforce, an increase of two percent.** Other notable sectors to examine are **Production Machinery, Tech, and Paper and Packaging due to their solid gains and above average wages.**

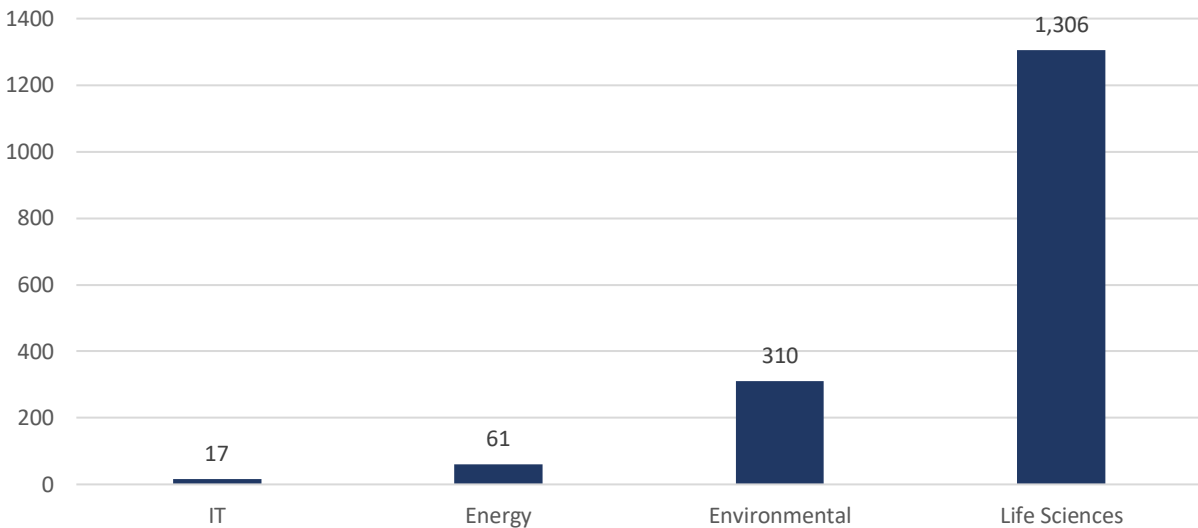
Tech is a broad sector that includes the manufacturing of tech products, such as computers, software, and precise devices, and subcomponents like semiconductors. In this analysis it also includes computer services that assist businesses such as systems design, server facilities management, and computer programming.

In NCTECH's 2020 State of Technology report, North Carolina remains a top five state for technology job growth. While much of the growth is concentrated in Charlotte and the Research Triangle, the data suggests that many parts of the state, including areas of the Southeast region, have enjoyed recent growth. This analysis confirms those findings, and suggests that even more success is possible. NCTECH also projects that North Carolina will remain a top tech growth state over the next few years.

Using the slightly broader definition of technology established by NCTECH (87 specific classification codes), the Southeast's technology sector added close to 1,700 net new jobs to the region between 2014 and 2019. Although basic IT (hardware, software, and communication) and the energy technology subsector were virtually unchanged, environmental tech companies added over 300 net new jobs. The big additions were in life sciences with an overall growth of 23 percent and a net job increase of over 1,300.



Net Technology Job Growth in the Southeast 2014-2019



A Note About the Health Care Industry

Including health care in any primary industry analysis is debated among economists. Traditionally, it has been assumed that health care was an industry that served the local market and did not export or bring in additional money from outside the region. **In many cases in the**

Southeast we believe that you can consider health care a significant primary industry; one that might bring in people from outlying, underserved places, pay high wages, and is a sector with strong national growth trends. Most officials see their regional hospitals as anchor institutions for the local economy. This



was the case for the NC's Southeast and why we chose to include health care in the initial analysis.

The Health Care industry employs over 84,450 workers in NC's Southeast. This concentration of employment is five percent lower than the national average, or a LQ of 0.95. Since 2014, jobs have increased modestly, by two percent. Health Care's growth and LQ that is just below average concentration, would rank it as an emerging industry area under our methodology for significant industries. The average earnings for a worker in the industry is \$61,200 annually, about \$9,000 lower than the national average (but likely offset by a lower cost of living in many of the NC's Southeast counties). Registered nurses make up about 13 percent of this industry's employment.

National research, and our stakeholder interviews, suggest that NC's Southeast health care providers are facing many challenges, especially in more rural settings. Declining large employer private insurance, the rise of out-of-hospital ambulatory competition, shortages of specialty health care workers, North Carolina's decision to not expand Medicaid, and the general lack of growth in rural America are all factors currently impacting NC's Southeast hospitals.

Expansion of Medicaid remains a complicated, divisive political decision. According to Chartis Center for Rural Health, 2019 was the worst year in over a decade for rural hospital closings. They report that one in four rural hospitals were at risk prior to the stresses accentuated by the COVID-19 pandemic. The near future for rural health care across the country faces strong headwinds.

The economic health of the Health Care industry is critical to the Southeast region's future growth potential. Quality health care availability is critical for recruiting quality companies and talent to the region. Most workers list quality health care as a priority for the places they decide to live and work.

Looking to the future, growth models predict that aggregate employment in the NC's Southeast, across all primary sectors, will increase by about 10,500 workers between now and 2024, resulting in many additional secondary or indirect and induced jobs. This will be led by over 3,020 new workers needed in the Health Care industry.

The Kaiser Family Foundation summarized the research on the impact of not expanding Medicaid as follows. "Studies demonstrate that Medicaid expansion has significantly improved hospital operating margins and financial performance. A study published in January 2018 found that Medicaid expansion was associated with improved hospital financial performance and significant reductions in the probability of hospital closure, especially in rural areas and areas with higher pre-ACA uninsured rates. Another analysis found that expansion's effects on margins were strongest for small hospitals, for-profit and non-federal-government-operated hospitals, and hospitals located in non-metropolitan areas. A third study found larger expansion-related improvements in operating margins for public (compared to nonprofit or for-profit) hospitals and rural (compared to nonrural) hospitals."

Health care occupations that will likely require the most net new workers, include the following.

Growth 2019-2024 Average Hourly Earnings

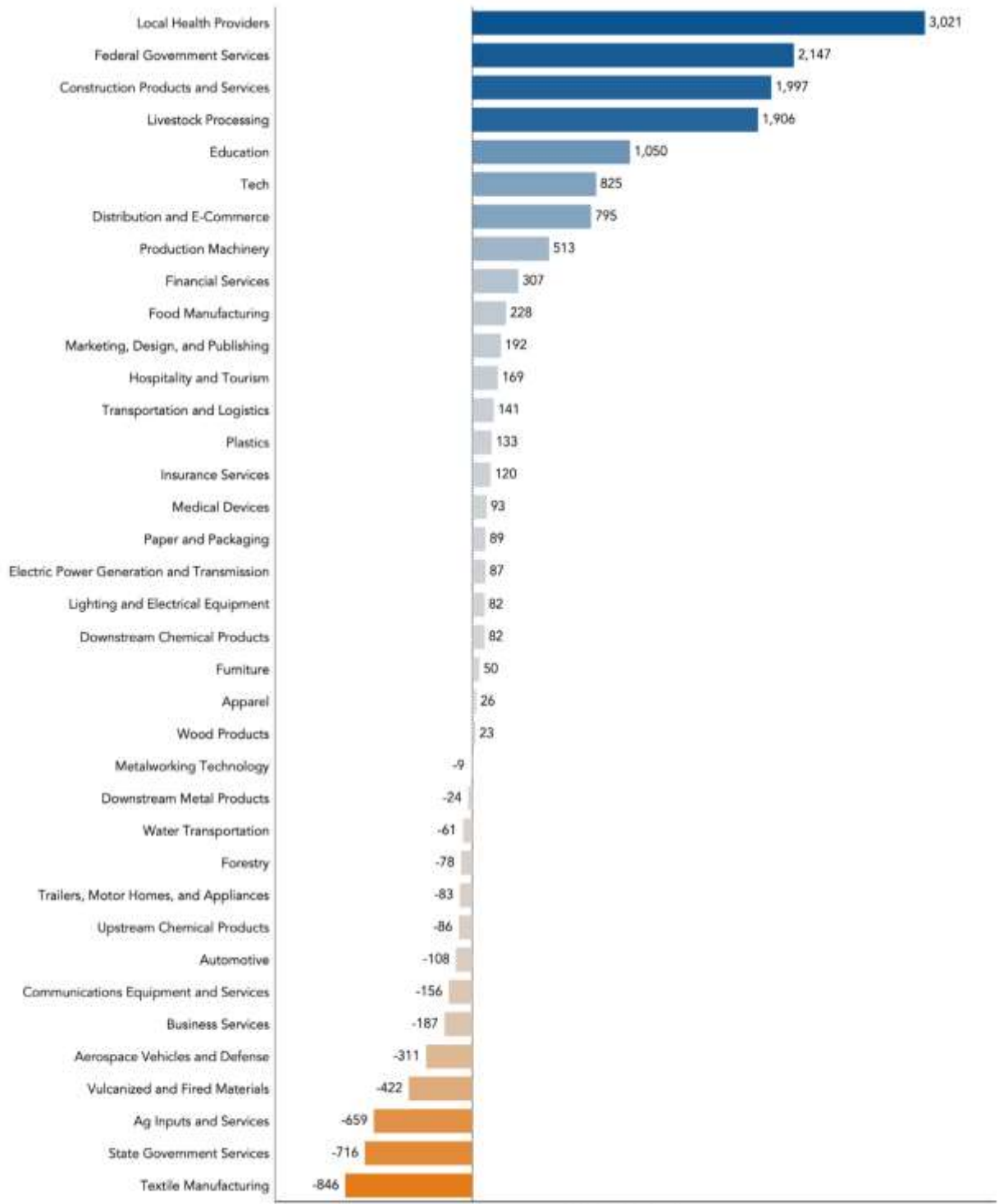
▪ Registered Nurses	654	\$30.73
▪ Medical Assistants	259	\$14.88
▪ Physician Assistants	113	\$52.87
▪ Dental Assistant	106	\$19.43
▪ Physical Therapists	104	\$42.71

There will also be strong demand for new nursing assistants, physical therapist assistants, massage therapists, physicians and surgeons, nurse practitioners, respiratory specialist, speech-language pathologists, and clinical laboratory technicians.

Other asset sectors like the Federal Government, Construction, and Livestock Processing will also lead in job growth. Consistent growth is also expected for Tech, Distribution and E-commerce, Food Manufacturing, and Transportation & Logistics. Increased focus on, and marketing to, these industries could increase the projected employment growth. Legacy industries like Aerospace and Textiles will remain important, but are currently predicted to continue job declines in the next five years. The impacts of COVID-19 are projected to be negative on the Aerospace sector but could positively impact the specialty Textile sector, especially in subsectors of Textile Health and Safety Materials.



Predicted Employment Change in NC Southeast



2019 - 2024 Job Change

Sub-Regional Analysis

NC's Southeast was also interested in analyzing specific microregions within the greater 18-county region to improve sub-regional marketing approaches.

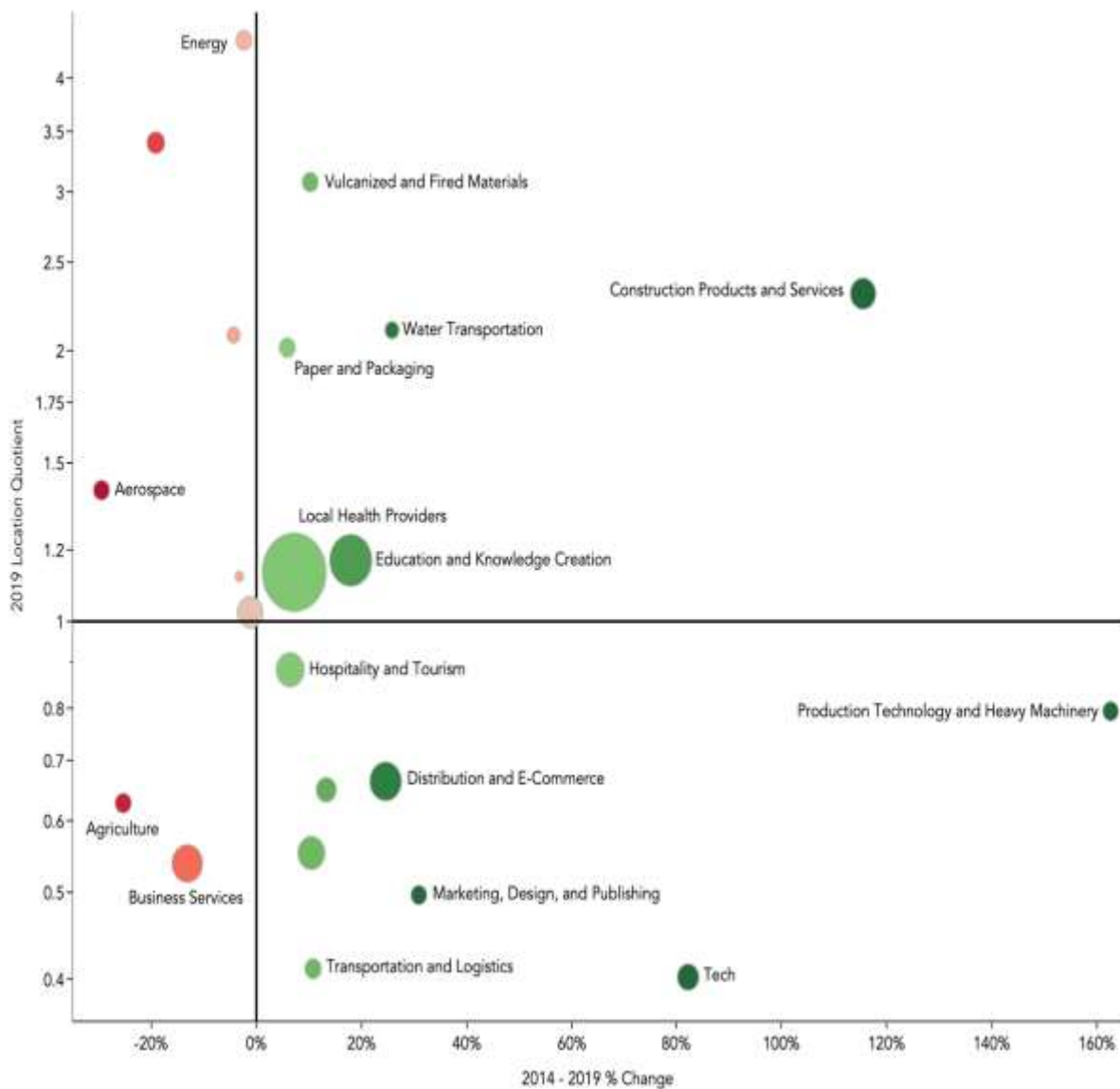
The first microregion of interest was Wayne, Lenoir, and Craven counties. These counties are home to some of the military installments in the region and include the Global TransPark, where several aircraft manufacturers are located. As expected, Federal Government Services is the largest employing industry sector. There were several asset sectors in the microregion. Trailers, Motor Homes, and Appliances was the most unique industry to the region; this is driven largely by an Electrolux manufacturing facility. Livestock Processing is a major employer and has seen significant job growth in the last five years. There is also an asset concentration of Plastics. Plastics is a moderate employer with strong growth in the greater NC's Southeast region.

Wayne, Lenoir, Craven Counties Industry Map



NC's Southeast was also focused on the greater Wilmington area where significant population growth has occurred. This microregion includes New Hanover, Pender, Brunswick, and Columbus counties. When the sub-region industries are mapped, we see several high growth sectors including Construction Products and Services, Production Technology and Heavy Machinery, and Tech. Health Care and Education are the top employers, with major hospital systems serving the region, and UNC – Wilmington located in the region. Aerospace is unique to the microregion, but the sector has experienced job losses in the last five years. Although not specifically identified in this analysis, Marine Biology is a focus area for the region that remains important.

Greater Wilmington Industry Map



Industry Opportunities

Three areas - Federal Government Services, Health Care and Construction - are critical to the regional economy, but as sectors are not the best marketing targets. Federal Government Services is a broad, complex sector, largely outside of the control of local economic developers. The local military bases use and consume everything, from fighter aircrafts to computer systems to uniforms to chicken wings. Specific marketing targets for NC's Southeast are better identified within their more specific sectors (Aerospace, Tech, Textiles, Food Processing). As one of the strongest and most important job and income generators, any shock to Federal Government Services would have massive rippling effects for the rest of the NC's Southeast economy. **We believe that NC's Southeast should devote resources to supporting this sector, and strengthening the supply chain opportunities for regional companies, but not include it as a current marketing target.**

The same thinking holds for the Health Care sector. Support for the health system and the region's hospitals is critical to maintaining a competitive investment product, but marketing targets need to be more specific. Specialty health textiles, pharmaceuticals and medical devices are examples.

The Construction industry serves the local market, but it is clear that the Construction Products and Services sector serves a broader area. The sector is growing rapidly and needs to be supported. Our interviews suggest that the lack of skilled labor acts as a throttle on current industry growth. Attracting more young people into the skilled trades, and partnering with educational institutions to provide the specific training, could be an impactful strategy.

Based on the industry mapping portion of the overall analysis, there are also several additional industry assets that have unique strengths in the region. Some are suffering from employment declines but are still major goods and services exporters and contributors to the regional economy. **Like Construction, many of these legacy industries may experience workforce issues as skilled workers age, making alignment between economic developers and workforce developers important.**

Asset Industries That Show Opportunity for Future Growth in the Southeast

- Livestock Processing
- Construction Products and Services
- Vulcanized and Fired Materials
- Textile Manufacturing
- Forestry
- Wood Products
- Paper and Packaging

There are three emerging industries that deserve to be further explored because they have seen significant growth levels and are expected to continue in the future.

Emerging Industry Areas with Increasing Opportunity for the Southeast

- Distribution and E-Commerce
- Technology
- Production Technology and Machinery

NC's Southeast Current Targets

Sector	Status	Employment	Past Job Change	Earnings	Future Job Change
Textile Manufacturing	Legacy	3,760	-20%	\$44,000	-23%
Apparel	Legacy	930	-19%	\$35,000	+3%
Footwear	Asset	250	+82%	\$33,000	+9%
Advanced Textiles	Legacy	4,930	-17%	\$41,000	-16%

Despite declining employment, textiles remain an important industry for the region. The port also provides a potential significant asset to the industry. A focus on specific advanced textiles, including those used for safety, protection and industrial uses could yield new success. Personal protection equipment (PPE) has become a national necessity in recent months, and increased production demand will probably remain high for years to come. As with agriculture and food, moving up the value-added production cycle to produce more specialized textiles can increase the earnings and output. North Carolina's higher education assets are known globally for their expertise in both value-added agriculture and textiles, and can be a competitive advantage in attraction.

To move up the value chain in both food processing and textiles, the community colleges in the region are critical to provide existing workers with new technical skills.

Aviation and Aerospace

NC's Southeast has a presence in aircraft manufacturing with GE Aviation and Spirit Aerosystems. These jobs offer the high earnings that are coveted by economic developers and workers alike. Although high-profile in the region, currently the level of jobs does not rise above the national average for a region of this size. Since major employment gains in the early 2000s, recent years have shown steady employment declines. There is potential for further private-sector development for this target industry if a company can be attracted, but the private industry is likely to experience employment and new production declines in the next few years due to COVID-19 impacts.

Through the early part of 2020 there was great optimism in the aviation and aerospace industry. According to a April 22, 2020 report from *Businesswire* the “Factors that were driving the aviation industry before the COVID-19 pandemic include increasing disposable income all across the globe, the introduction of low-fare airlines, increasing global economic activities, new travel trends, and many more. Moreover, replacement of aging commercial aircraft has also contributed significantly to the market growth.” Now global travel has largely ceased with a return to prior levels by major carriers unlikely anytime soon. Short, inexpensive tourism travel is expected to see major reductions. One area that could be impacted positively is a rise in the production of smaller private aircraft.

Sector	Status	Employment	Past Job Change	Earnings	Future Job Change
Aircraft Manufacturing	No Specialty	1,610	-20%	\$150,000	-19%
Air Transport	Emerging	1,170	0%	\$65,000	+5%
Aviation and Aerospace	No Specialty	2,780	-13%	\$114,000	-10%

The Economic Development Partnership of North Carolina is likely to maintain Aerospace and Defense as one of their targeted industries. Partnering on statewide opportunities might be a better choice for NC’s Southeast allocation of marketing resources.

A continued focus on the military side of aviation is warranted. The direct and indirect impact of current and potential defense aviation resources in the region is significant. The Southeast needs to support the AeroDef sector with advocacy and supplier identification, attraction, and support.

Biotechnology

With several research universities, and the presence of PPD (a large global clinical trial pharmaceutical company in Wilmington), NC’s Southeast believes that the region has an opportunity to expand jobs in biotechnology. To create this target industry, we pulled the Research & Development sector out of the Education and Knowledge Creation sector and added in Biopharmaceuticals, Medical Devices, and Chemical Products. As NC’s Southeast is excited about bioenergy technology in the region, we also included the Biomass Energy sector. Notably earnings are very high in this sector, likely due to the high skills required for workers.

Past job growth has been strong throughout almost the entire target industry, and the future job growth is also predicted to be strong at five percent over the next five years.

Sector	Status	Employment	Past Job Change	Earnings	Future Job Change
Research & Development	Emerging	3,000	+14%	\$113,000	+5%
Biopharmaceuticals	Emerging	150	+44%	\$131,000	+24%
Chemical Products	Emerging	2,080	+1%	\$94,000	0%
Medical Devices	Emerging	910	+36%	\$57,000	+10%
Biomass Energy	Legacy	50	-19%	\$99,000	0%
Biotechnology	Emerging	6,190	+12%	\$99,000	+5%

This is a sector where COVID-19 impacts will almost certainly increase opportunity. There is a high probability that the production of pharmaceuticals, biologicals, and medical devices and equipment will be aggressively reshored to the United States. According to the Food and Drug Administration, nearly three-quarters of the active ingredients for medicines sold in the U.S. are produced in other countries. Only 28 percent are domestic.

It is reasonable to expect that increased site selection activity in the United States has already begun. North Carolina is a major biotech and vaccine state and should have significant opportunity. Many regions in the state target this industry and NC's Southeast will face stiff intrastate competition. Nevertheless, this is an opportunity worth the dedication of marketing resources.

EDPNC Targeted Industries

- Aerospace & Defense
- Automotive
- Food Processing & Manufacturing
- Information Technology
- Biotechnology & Pharmaceuticals
- Business & Financial Services
- Corporate Headquarters
- Furniture
- Outdoor Recreation
- Plastics and Chemicals
- Textiles

Defense & Military

With the largest concentration of military personnel on the East Coast, NC's Southeast military and defense assets are unique and major drivers of the economy. This target industry is expected to grow further with the FRC East capabilities to maintain F-35 fighter jets set to become fully operational in 2020. To measure this target industry, we segmented the Defense Industries from the Aerospace and Defense sector and added them to the Military sector from the Federal Government Services grouping. Employment in this large target industry is expected to stay stable over the next five years. The economic development opportunity for growth will

be recruiting private suppliers who support the military operations in the region.

North Carolina is, and will remain, a welcoming home for important military installations and personnel for many years to come. While tantalizing in scope and potential impact, success in attracting significant defense contractors and suppliers has proven difficult over the past decades. The Department of Defense has about 50,000 contractors each year, contracting for everything from jet aircraft to medical supplies to apparel. The defense industry could be viewed as an aggregate of many (most) other industries. Many factors impact DOD decisions and private sector decisions on where to locate facilities.

Sector	Status	Employment	Past Job Change	Earnings	Future Job Change
Defense	Emerging	30	+40%	\$178,000	-30%
Military	Legacy	108,500	-2%	\$62,000	+1%
Defense & Military	Legacy	108,530	-2%	\$62,000	+1%

As stated earlier, NC’s Southeast needs to devote resources to supporting the military bases and advocating for investments and actions that will strengthen their continued and hopefully expanded operations. We believe that the most efficient and effective marketing opportunities will occur within other sectors.

Energy

The traditional energy sector is strong with Duke Energy, Cooperatives, and ElectricCity Communities operating in the region. Earnings are high, but the industry employment levels have been reduced in the past few years. New growth could come from nontraditional energy generation. The region has ample solar resources, and some wind resources. The sector activity of Forestry and Animal Processing produces waste that can be converted into biomass. There is substantial development activity currently ramping up in the utilization of pork and poultry waste. Despite recent losses, projections suggest some future job growth.

Sector	Status	Employment	Past Job Change	Earnings	Future Job Change
Electric Power Generation and Transmission	Legacy	1,110	-16%	\$178,000	+8%

Alternative energy investment should continue in the region due to a good match between regional assets and new energy demands. We believe that there are limited marketing opportunities in this sector for NC’s Southeast. Energy availability, reliability and costs will

remain important competitive factors, and the Southeast should devote some resources to support continued energy competitiveness.

Distribution & Logistics

The rise of online shopping and Amazon has made Distribution and E-commerce an emerging sector in almost every region we have studied in the past several years. The NC's Southeast is no different, but also has unique assets in the form of the Wilmington deep water port. Jobs have been added in the past five years, and the COVID-19 impacts could raise the growth rate significantly from current



projections. Recent regional activity has included joint manufacturing and distribution projects.

Sector	Status	Employment	Past Job Change	Earnings	Future Job Change
Distribution & E-Commerce	Emerging	13,520	+11%	\$59,000	+6%
Transportation & Logistics	No Specialty	4,640	-2%	\$64,000	+3%
Water Transportation	Emerging	1,230	+42%	\$47,000	-5%
Distribution & Logistics	Emerging	19,390	+9%	\$60,000	+5%

The Southeast's transport infrastructure is a competitive advantage. As a growing sector, likely to grow faster due to COVID-19 impacts, this sector presents an opportunity for the region. The Logistics sector will experience rapid technological advancement in the coming years, with demands for trained employees and customized buildings.

Metal Working

Examining the data from the sector analysis, the region did not appear to have a significant advantage in the Metalworking sector. We expanded the analysis to include an even larger value chain for the metal products that often supply metalworking, as well as the production machinery sector that often uses metal to produce machinery. This greater value chain shows

an emerging target industry with strong job growth, particularly from the Production Machinery sector.

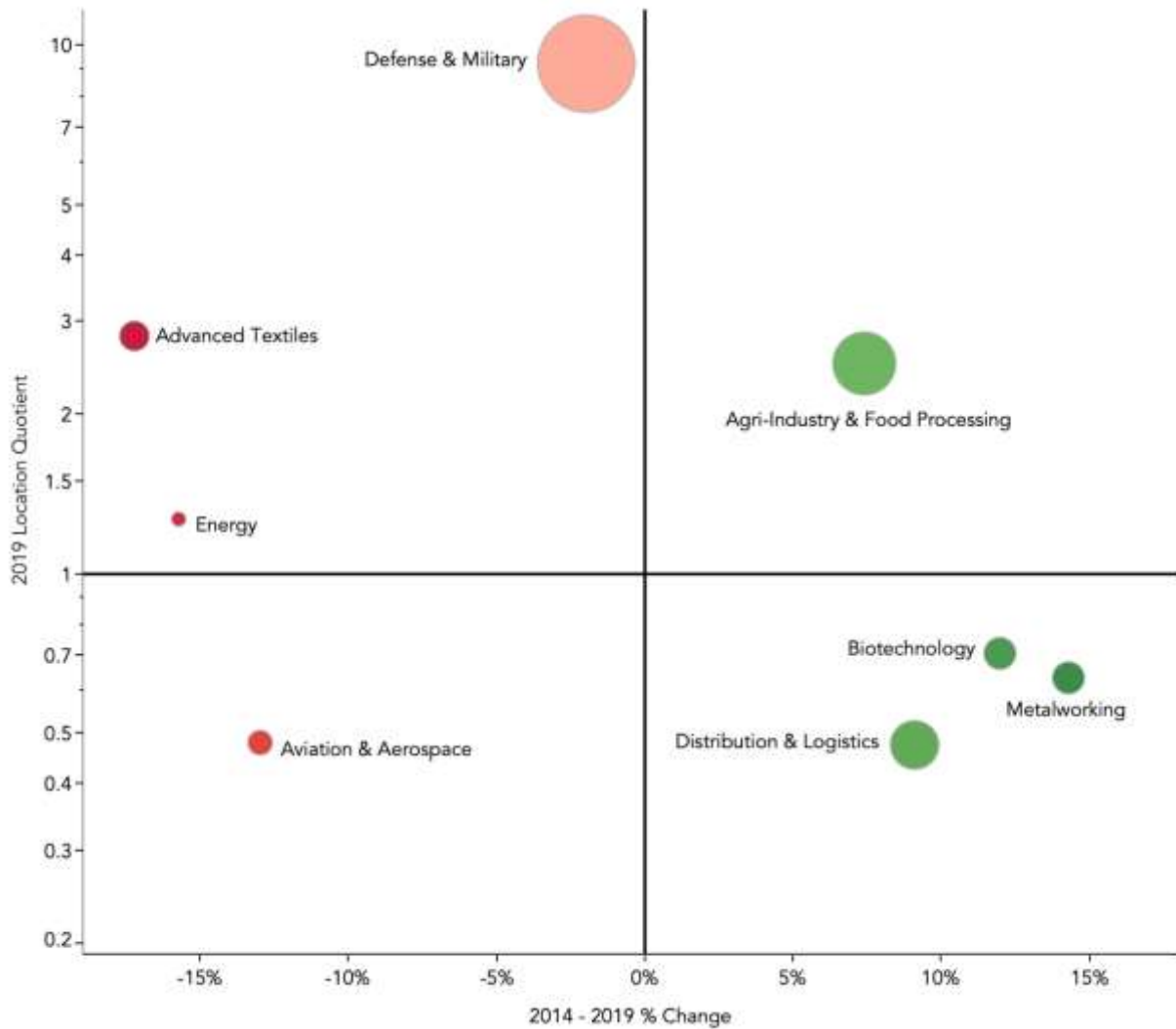
Sector	Status	Employment	Past Job Change	Earnings	Future Job Change
Downstream Metal Products	No Specialty	2,160	-8%	\$67,000	-1%
Production Technology & Heavy Machinery	Emerging	3,050	+48%	\$73,000	+17%
Metalworking Technology	No Specialty	840	-5%	\$59,000	-1%
Metalworking	Emerging	6,050	+14%	\$69,000	+8%

Production Technology and Heavy Machinery has growth potential and offers a good marketing target. The marketing targets would be companies that produce machines and parts designed to produce end user, or downstream, goods in the industrial, agricultural, construction and commercial industries. Earnings are high, and we believe with a strong community college training partnership, this is a new area for growth.

If we apply the same mapping methodology to the current NC's Southeast target industries, the results reveal mixed outcomes. Only one target industry truly registers as an asset: Agri-industry and Food Processing. There are three additional strongly emerging industries in the region: Biotechnology, Metalworking, and Distribution and Logistics. Aerospace, Textiles, and Energy have all seen significant net job loss in the past five years.

Based on the industry analysis, some industries that are assets are not current regional target industries. Vulcanized and Fired Materials, Construction Products and Services, as well as Forestry and Associated Products (wood products, furniture, paper and packaging) have a statistically unique presence in NC's Southeast, and could be targeted. Tech is another emerging industry that could be included in the targeted industries.

NC Southeast Current Target Industries Map



Matching Strengths to Industry Needs

The third level of assessment is the development of a matrix evaluating regional strengths in relationship to the various industry requirements. The NC's Southeast benefits from the state's highly competitive business climate. Most multifactor analyses rank the state among the top 10 best states for business, and the most recent site selector survey named North Carolina as the state that had improved its business climate the most in recent years. Other factors that rank high on *Area Developments 34th Survey* released earlier this year include a low corporate tax rate, low union profile, and energy costs, which are all strengths of the state. (See list below)

The other key factors in the ranks include highway accessibility, availability of skilled labor, local training capacity, quality of life, occupancy costs, the availability of ready buildings and sites, and proximity to markets and suppliers. The 18 counties of NC's Southeast have almost 800,000

workers in the labor force with about one-third having a college degree (AA, bachelor's, or advanced degree).

The region has greater diversity than the nation and is home to a significantly higher percentage of veterans. The education pipeline is fueled by over 21 institutions including six four-year institutions and 15 community colleges that produce over 25,000 graduates annually. The pipeline has grown by over 20 percent in the past five years. One negative is the region's ability to sustain its labor force quantity. Some companies will be concerned by data that show population decline in more than half of the region's counties over the past five years.

Transportation infrastructure is also a regional strength with several interstates and service from rail, the Port of Wilmington and numerous airports. There are also many available high-quality buildings and sites scattered throughout the region. **Our analysis shows different levels of competitiveness from county to county based on access to infrastructure, availability of buildings and sites, and labor force quantity and skills. Currently the region needs more high-quality buildings.** If the buildings available can be improved, and the workforce continues to improve its overall training, the region could be an excellent home for any of the industries discussed.

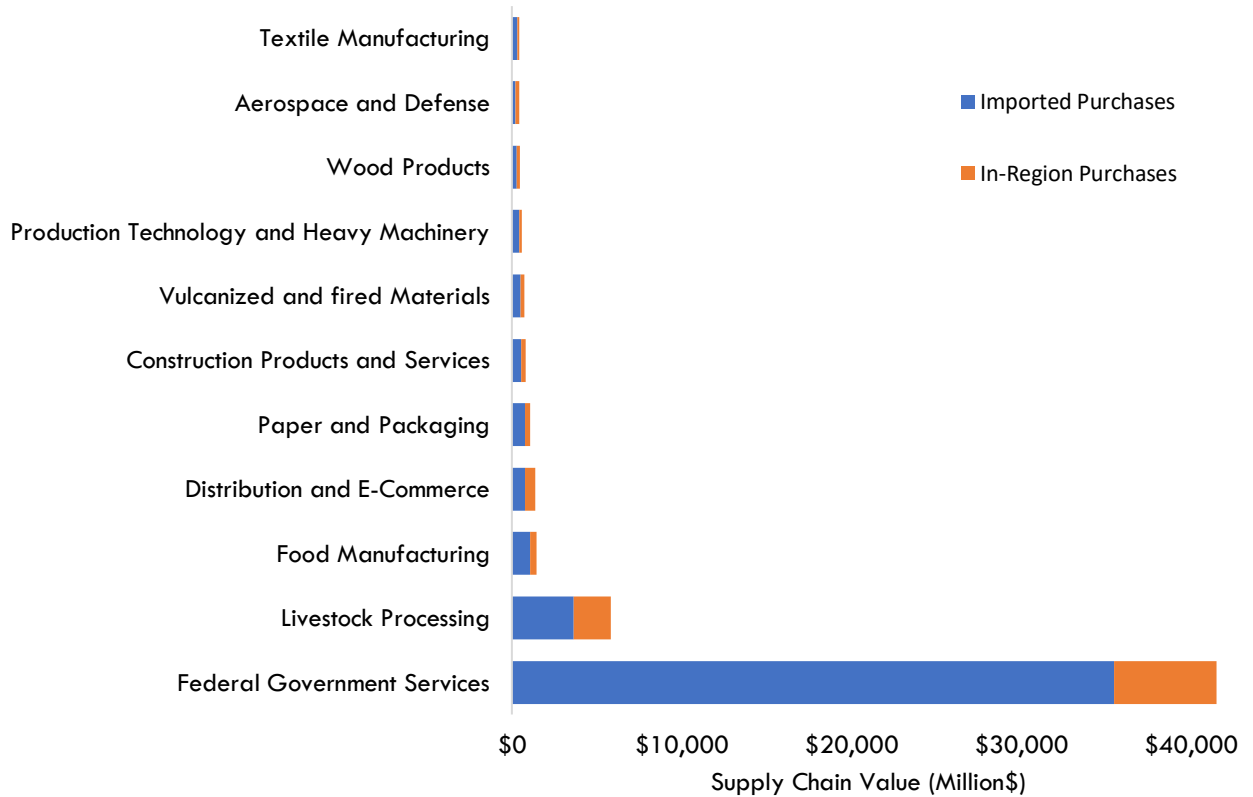
North Carolina's Southeast Supply Chain Analysis

Building from the research of the asset industries of NC's Southeast, our fourth analysis dives deeper into the supply chains of top traded sectors to help identify effective targets for economic development marketing. Examining what goods and services are imported to the region shows where money is leaking outside of the region and offers potential recruitment opportunities. If an anchor industry is having to import heavily from another industry in its supply chain, this could be a recruitment opportunity to bring more supply chain companies to the region and keep money within the community. It helps bring new companies to your area while simultaneously reducing costs for your existing companies. This type of approach is enhanced by a strong Business Retention and Expansion program where regional and local economic developers are in constant discussions with their anchor companies.

To generate specific target industries, we evaluated data based on the sector analysis. The supply chains of the most relevant asset and emerging sectors from the analysis were evaluated. This analysis looks at the supply chain requirements and spending of these top sectors, as well as the supply chain for all sectors in NC's Southeast.

Data from EMSI's input/output model for the year 2019 breaks down the amount of purchases the sector buys from other industries (six-digit NAICS code level). This spending is broken down by spending that is met within region, and out of the region. The sectors with the highest value of out-of-region, or imported, purchases represent the largest leakage and therefore opportunities for regional economic developers.

Supply Chain Purchases for Top Sectors



The Federal Government Services sector has the largest supply chain in the region at an annual value of \$42 billion. Only 15 percent of that demand is sourced within the NC's Southeast region, meaning \$35 billion in military spending leaks out of the region to other areas. The next largest supply chain is Livestock Processing with almost \$6 billion in spending. For Livestock Processing, about 37 percent is met in-region. The percentage sourced within the region ranges from 15 percent with Federal Government Services to 55 percent for Aerospace and Defense. **Across all examined sectors, the supply chain has a value of \$74 billion. About 26 percent of these needs are sourced within NC's Southeast, meaning \$55 billion leaks outside of the region. Keeping any greater portion of this spending in NC's Southeast could represent a significant positive economic impact to the area.**

Supply Chain Value by Sector

Sector	Total Value of Supply Chain (million\$)	% Sourced Within Region	Value of Imported Purchases (million\$)
Federal Government Services	\$41,528	15%	\$35,473
Livestock Processing	\$5,846	37%	\$3,656
Food Manufacturing	\$1,467	26%	\$1,082
Distribution and E-Commerce	\$1,377	44%	\$777
Paper and Packaging	\$1,068	28%	\$767
Construction Products and Services	\$817	31%	\$565
Vulcanized and Fired Materials	\$755	30%	\$529
Production Technology and Heavy Machinery	\$587	26%	\$433
Wood Products	\$473	39%	\$287
Aerospace and Defense	\$432	55%	\$196
Textile Manufacturing	\$423	23%	\$326
Electric Power Generation and Transmission	\$414	37%	\$263
Tech	\$287	45%	\$159
Forestry	\$98	49%	\$50
All Sectors	\$74,273	26%	\$54,805

The sectors with the top three supply chains were evaluated further to see which specific industries they import purchases from outside the region.

Federal Government Services

The Federal Government Services sector is dominated specifically by the military in NC's Southeast. The military imports over a billion dollars from each of the top six supplying industries. The highest in-region purchasing percentage was 20 percent, with many industries falling below that level. The top supplier by far in the military is Aircraft Manufacturing. Only six percent of this need is met within NC's Southeast. Since this sector is national in scope, opportunities to attract a supplier or have an existing company fulfill the demand are not likely.

Other needs that could be met within the region are Computer Systems Design Services, Engineering, Ship Building and Repair, and Research & Development. Helping regional companies secure military contracts, or recruiting military suppliers to the region, offer potential gains for NC's Southeast.

Top Supply Chain Needs for Federal Government Services

Purchases From	In-region Purchases (million\$)	% In-region Purchases	Imported Purchases (million\$)	% Imported Purchases
Aircraft Manufacturing	\$144	6%	\$2,418	94%
Petroleum Refineries	\$2	0%	\$1,539	100%
Computer Systems Design Services	\$96	7%	\$1,256	93%
Engineering Services	\$143	11%	\$1,221	89%
Data Processing, Hosting, and Related Services	\$34	3%	\$1,188	97%
Ship Building and Repairing	\$1	0%	\$1,016	100%
Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	\$6	1%	\$883	99%
Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)	\$26	4%	\$676	96%
Guided Missile and Space Vehicle Manufacturing	\$0	0%	\$646	100%
Administrative Management and General Management Consulting Services	\$112	20%	\$460	80%
Custom Computer Program Services	\$64	12%	\$460	88%
Other Electronic Parts and Equipment Merchant Wholesalers	\$25	6%	\$414	94%
Software Publishers	\$31	7%	\$410	93%

Livestock Processing

Livestock Processing sources more of its purchases in region, in general, compared to the military. However, opportunities for greater connections exist. Processers source 69 percent of their animals from outside the region, while the region is one of the top animal production areas. Other top suppliers are Transportation and Logistics industries like trucking and warehousing.

Top Supply Chain Needs for Livestock Processing

Purchases From	In-region Purchases (million\$)	% In-region Purchases	Imported Purchases (million\$)	% Imported Purchases
Animal Production	\$929	31%	\$2,069	69%
Meat Processed from Carcasses	\$38	12%	\$289	88%
Corporate, Subsidiary, and Regional Managing Offices	\$11	4%	\$256	96%
General Freight Trucking, Long-Distance, Truckload	\$79	49%	\$84	51%
General Freight Trucking, Long-Distance, Less Than Truckload	\$15	23%	\$51	77%
General Freight Trucking, Local	\$36	42%	\$51	58%
Corrugated and Solid Fiber Box Manufacturing	\$4	7%	\$49	93%
General Line Grocery Merchant Wholesalers	\$10	17%	\$48	83%
Other Grocery and Related Products Merchant Wholesalers	\$12	21%	\$46	79%
Specialized Freight (except Used Goods) Trucking, Local	\$16	32%	\$34	68%
General Warehousing and Storage	\$11	27%	\$30	73%

Food Manufacturing

The next most valuable supply chain is the Food Manufacturing sector. Again, Animal Production is only sourced 26 percent within the region. Crop Production is the top supplier and is sourced in-region at 33 percent. Given the NC's Southeast agriculture presence this value could be higher. Many food processing companies outsource their corporate offices to other areas.

Top Supply Chain Needs for Food Manufacturing

Purchases From	In-region Purchases (million\$)	% In-region Purchases	Imported Purchases (million\$)	% Imported Purchases
Crop Production	\$105	33%	\$212	67%
Soybean and Other Oilseed Processing	\$53	32%	\$111	68%
Corporate, Subsidiary, and Regional Managing Offices	\$2	4%	\$56	96%
Distilleries	\$1	2%	\$37	98%
Flour Milling	\$0	0%	\$28	100%
Animal Production	\$10	26%	\$28	74%
Other Grocery and Related Products Merchant Wholesalers	\$8	25%	\$25	75%
General Line Grocery Merchant Wholesalers	\$10	30%	\$23	70%
Fats and Oils Refining and Blending	\$0	0%	\$20	100%
Rail Transportation	\$7	27%	\$20	73%

All Industries

While the previous industries represent the largest supply chains of the top sectors, there are many other important industries in the region. To round out the analysis, we looked at the sourcing needed by all industries. While a supplier company is most likely to be drawn by one of the top existing companies, it can be beneficial to show the full extent of potential from all industries in NC's Southeast.

Given the large military presence in the region, many of the top military supply needs show up in the total list as well, reiterating that securing more local military suppliers would be the best way to capture leakage. Many of the top needs are Tech related industries. The industry analysis revealed growth in the Tech sector in NC's Southeast.

Top Supply Chain Needs for All Traded Industries

Purchases From	In-region Purchases (million\$)	% In-region Purchases	Imported Purchases (million\$)	% Imported Purchases
Aircraft Manufacturing	\$155	6%	\$2,445	94%
Animal Production	\$1,095	33%	\$2,257	67%
Petroleum Refineries	\$4	0%	\$2,048	100%
Computer Systems Design Services	\$125	8%	\$1,391	92%
Engineering Services	\$200	13%	\$1,328	87%
Data Processing, Hosting, and Related Services	\$58	4%	\$1,325	96%
Corporate, Subsidiary, and Regional Managing Offices	\$46	4%	\$1,174	96%
Ship Building and Repairing	\$1	0%	\$1,019	100%
Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	\$6	1%	\$910	99%
Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotech)	\$31	4%	\$681	96%
Guided Missile and Space Vehicle Manufacturing	\$0	0%	\$650	100%
Administrative Management and General Management Consulting Services	\$234	30%	\$545	70%
Custom Computer Programming Services	\$84	14%	\$517	86%
Other Electronic Parts and Equipment Merchant Wholesalers	\$27	5%	\$478	95%
Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	\$30	6%	\$467	94%
Software Publishers	\$68	13%	\$453	87%
Internet Publishing and Broadcasting and Web Search Portals	\$15	3%	\$415	97%
Research and Development in Biotechnology (except Nanobiotechnology)	\$112	24%	\$366	76%
Meat Processed from Carcasses	\$44	11%	\$359	89%
Direct Property and Casualty Insurance Carriers	\$63	15%	\$352	85%

Crop Production	\$206	37%	\$349	63%
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Reducing Leakage

This analysis reveals that the military supply chain represents the highest value, and biggest lever, on reducing leakage in NC's Southeast. The state of North Carolina is also interested in expanding the number of local companies that secure defense contracts. Currently, only about 12 percent of North Carolina companies have defense contracts. Researchers at RTI International and NC Department of Commerce recently released a study focused on growing the state's defense and homeland security economy. The report found the main barriers to more success are:

- Lack of awareness of relevant opportunities,
- Difficulties navigating government requirements and the contracting process, and
- Greater financial opportunities in the private market.

The report lists four major recommendations on improving local defense contracts including improving networking and collaboration, providing contracting assistance, remove barriers of entry, and agency outreach. The group responsible for this report is the Defense Alliance of North Carolina. Partnering with this organization to implement these recommendations on the ground in NC's Southeast could be productive to secure more contracts. Considering that this a high priority for the state, there may be resource assistance that can be provided for these efforts.

Another effort that can be taken from this information is ensuring that local companies are aware of local suppliers and making these connections. For example, there may be a local company spending money on a web developer who lives in California while there is an existing website development company five miles down the road. Usually these missed connections happen because of lack of awareness; other times the supplier may need assistance getting their operations up to par with the demands of the buyer.

In NC's Southeast, Animal and Crop Production are both top traded industries, yet \$685 million and \$796 million were exported from the region in 2019, respectively. They are both top inputs required for industries in the NC's Southeast, but only 33 percent and 37 percent are sourced locally. This allows for almost \$2.6 billion to leak from the region. If we address the gaps where a local animal producer could be meeting a local buyer's needs, this could help keep money in the region and help bolster the Food Processing and Agricultural Inputs and Services sectors.

Conclusions and Recommendations

No analysis provides an easy answer to the question of which industries North Carolina's Southeast should target. In addition to the fruits of the regional effort, new interest in the region will be generated from many sources including the marketing efforts of the state and NCPED, the individual county offices, allies, and the existing businesses. Based on the research and input from stakeholders, and our team, we make the following recommendations, beginning with the NC's Southeast eight current targeted industries.

Current Targeted Industries Recommendation Expanded Explanations

Advanced Textiles	Maintain as Target	Focus on advanced textiles in the health and safety sector & target value-added manufacturers. NC's history, workforce and research capacity is a competitive advantage.
Agri-Industry & Food Processing	Maintain as Target	Focus marketing on value-added and more on the processing component - growth is expected to be strong
Aviation & Aerospace	Support (not marketing target)	The private components of the sector will face near-term reductions due to COVID-19. It remains important and may warrant additional marketing in future years. The Defense aviation presence warrants support and advocacy
Biotechnology	Narrow Focus	Redefine target as med-tech and focus on medical devices and the near-shoring of pharma and pharma components
Defense & Military	Support & Advocacy (not marketing target)	Increase support to build existing business supply chain opportunities but reduce marketing

Distribution & Logistics	Maintain as Target	E-Commerce opportunities are likely to expand, and recent growth has been strong
Energy	Support & Advocacy (not marketing target)	Energy remains important, but marketing opportunities (outside alternative energy) will be limited
Metal Working	Re-Focus	Redefine as production technology and heavy machinery

The recommendations are to devote staff resources to support the Defense and Construction and Building Products sectors through BRE and supply chain activities, support the Health Care sector through influence leadership, and to respond to new energy opportunities that present themselves.

We recommend that North Carolina's Southeast target **Advanced Textiles** with a focus on health and safety, **Value-Added Agriculture and Food Processing**, **Medical Technology** with a focus on medical devices, **Distribution and Logistics**, and **Production Technology and Heavy Machinery** to generate clients for the broad region. Despite projections that the Agriculture and Food Processing sector will continue to see job contraction, it is an industry that is critical to the economy of many of the counties in the region. The other four recommendations are all industries expecting strong growth over the next five years. Construction and building products are also expected to grow and if additional marketing funding becomes available, dedicated efforts could yield results.

We also see opportunities in the broader Technology sector for the Wilmington subregion especially in Life Science, Plastics in the Wayne, Lenoir, and Craven counties subregion, and targeted recruitment in manufacturing and research to the Golf sector for Moore County.

We further recommend that the region reduce resources to market to the Aviation and Aerospace, Defense and Military, and Energy sectors.

Finally, we recommend that North Carolina's Southeast focus on existing company supply chains to expand their marketing reach.

Top Industry Groupings Descriptions

Livestock Processing

Establishments that process meat from livestock are included in this sector. Livestock wholesaling companies are also included in the livestock processing sector.

Industries included:

- Animal Slaughtering
- Meat Byproduct and Carcasses Processing
- Poultry Processing
- Air Handling Equipment
- Livestock Merchants Wholesalers

Top Company in NC's Southeast: Butterball

Construction Products and Services

Industries involved in this sector include those that manufacture inputs that are used in residential, commercial, and industrial construction such as cement, asphalt, pipes, heat exchangers, etc. The sector also includes engineering services for heavy construction. Industries that construct for other businesses including industrial construction and pipeline construction are also included.

Industries included:

- Non-Residential Construction
- Water, Sewage, and Other Systems
- Construction Products
- Construction Components
- Construction Materials

Top Company in NC's Southeast: Rush Construction

Vulcanized and Fired Materials

In this sector, manufacturers use extremely high temperatures to process earthen substances like clay, rubber, and sand into goods such as brick, glass, and tires.

Industries included:

- Clay Products and Refractories
- Glass Products
- Rubber Products

- Tire manufacturing

Top Company in NC's Southeast: Goodyear Tires

Textile Manufacturing

This sector focuses on the mills that produce finished fabrics for clothing, carpets, and other household goods. It also includes the manufacturers of the fibers used by mills.

Industries included:

- Yarn and Thread Mills
- Fabric Mills
- Textile and Fabric Finishing
- Knitting Mills
- Household Textile Products
- Other Textile Products
- Fibers

Top Company in NC's Southeast: Kayser Roth Corporation

Forestry

Companies in this sector are involved in the growing and/or harvesting of trees. Support activities are also included. As a legacy sector, however, predicted job loss and an industry ripe for automation present specific challenges.

Industries included:

- Logging
- Timber Tract
- Forest Nurseries
- Forestry Support Activities

Top Company in NC's Southeast: Weyerhaeuser

Wood Products

Given the strong historical presence of forestry in the region, establishments that could help process the timber also became prevalent in the industry. Movements to source and manufacturer locally, similarly to food, are starting in the furniture and woodworking sphere. The natural forests in the region offer a unique advantage for wood manufacturing companies.

Industries included:

- Wood Processing
- Wood Components and Products

- Prefabricated Wood Building

Top Company in NC's Southeast: West Fraser Sawmill

Paper and Packaging

Within this sector are manufacturers of paper, paper mills, and the manufacturing of packaging products.

Industries included:

- Paper Mills
- Packaging
- Paper Products

Top Company in NC's Southeast: Pactiv

Distribution and Electronic Commerce

Traditional wholesalers and electronic merchants are the companies included in this sector. These companies' primary functions are buying, warehousing, and distributing goods. Goods range across a variety of materials and uses. Also included in the sector are companies that support wholesalers.

Industries included:

- Warehousing and Storage
- Electronic and Catalog Shopping
- Wholesale Trade Agents and Brokers
- Packaging and Labeling Services
- Wholesalers
- Rental and Leasing

Top Company in NC's Southeast: Atlantic Packaging Corp

Tech

This sector, slightly adapted from US Cluster Mapping, is also known as Information Technology and Analytical Instruments. This sector includes the manufacturing of tech products such as computers, software, and precise devices. It also includes the makers of subcomponents like semiconductors. In this variation, it includes computer services that help businesses such as systems design, server facilities management, and computer programming.

Industries included:

- Electronic Components
- Computers and Peripherals

- Semiconductors
- Software Publishers
- Software Reproducing
- Process and Laboratory Instruments
- Medical Apparatus
- Audio and Video Equipment
- Computer Business Services

Top Company in NC's Southeast: Cisco Systems

Production Technology and Heavy Machinery

In this sector, companies produce machines and parts designed for the production of end user, or downstream, goods. Often these products are used by other manufacturers to deliver to industrial, agricultural, construction and commercial industries.

Industries included:

- Industrial Machinery
- Agricultural Machinery
- Construction Machinery
- Air Handling Equipment
- Commercial and Service Industry Machinery
- Moving and Material Handling Equipment
- Process Equipment and Components

Top Company in NC's Southeast: Railroad Friction Products Corp

Regional Data Comparisons

Economic development is a competition between places. The winners add jobs, wealth, companies, and residents. As was mentioned in the first section about future trends, there is an expanded role for data analytics in the site selection process. It is no longer enough to know what your regional assets are, you must understand how they compare to your competitors. Effective economic development organizations promote the areas where they have a competitive advantage and improve the regional product where there are deficiencies.

No two regions are alike, and no two clients equally value the same assets. Maintaining a data base of both the Southeast Region, and likely competitors, allows for quick response to opportunities, but also allows for ongoing strategic improvement. The table below shows some basic information about the 18-County region and about the Fayetteville and Wilmington Metropolitan Statistical Areas.

	NC's Southeast 18 County Region	Fayetteville NC MSA	Wilmington NC MSA
Population (2019)	1,836,745	524,202	299,510
Population Percentage Growth (2014-2019)	2.9%	2.6%	10.2%
Employment (2019)	802,319	218,643	145,097
Employment Percentage Growth (2014-2019)	4.5%	2.8%	14.4%
Employment to Population Ratio (2019)	43.7%	41.7%	48.4%
Average Earnings per Job (2019)	\$51,100	\$55,758	\$53,490
Cost of Living (U.S. = 100)	93.6	91.0	94.4
Gross Regional Product Per Capita (2019)	\$46,152	\$48,798	\$50,750
Exports Per Capita (2019)	\$81,340	\$111,064	\$48,412
Educational Attainment - AA degree and above (2019)	33.1%	32.8%	45.7%
Largest Industry (number of jobs in region) (2019)	Government	Government	Government
Top Growing Industry (2014-2019) Number of Net New Jobs	Accom. & Food Service	Construction	Construction
Postsecondary Graduates (2019)	26,498	8,549	7,118
Educational Pipeline Growth (2014-2019)	15%	8%	10%

The table below shows how the Wilmington MSA compares on specific data points to similar sized southern MSAs.

	Wilmington NC MSA	Ocala FL MSA	Roanoke VA MSA	Clarksville TN MSA	Kingsport TN MSA	Longview TX MSA	Laredo TX MSA	Lynchburg VA MSA	Charleston WV MSA	Tuscaloosa AL MSA	Fort Smith AR MSA
Population (2019)	299,530	364,568	314,929	308,534	306,440	296,874	278,794	264,741	258,144	253,202	250,839
Population % Growth (2014-2019)	10.2%	7.8%	0.7%	6.5%	-0.2%	1.3%	4.1%	2.6%	-5.6%	2.5%	1.2%
Employment (2019)	145,097	118,037	166,199	131,066	127,579	134,062	116,964	121,243	123,291	118,913	109,792
Employment % Growth (2014-2019)	14.4%	11.7%	1.5%	3.2%	0.3%	-3.8%	9.1%	3.7%	-6.6%	8.2%	1.6%
Employment /Population Ratio (2019)	48.4%	32.4%	52.8%	42.5%	41.6%	46.7%	42.0%	45.8%	47.8%	47.0%	43.8%
Average Earnings per Job (2019)	\$53,490	\$46,274	\$53,891	\$53,141	\$52,648	\$55,778	\$45,697	\$49,072	\$58,705	\$53,953	\$48,471
Cost of Living (U.S. = 100)	94.4	95.1	102.6	91.0	95.1	91.6	88.4	97.7	95.0	93.2	89.2
Gross Regional Product Per Capita (2019)	\$50,750	\$28,801	\$50,488	\$47,969	\$40,465	\$55,774	\$32,641	\$41,550	\$53,071	\$46,998	\$40,664
Exports Per Capita (2019)	\$48,412	\$26,058	\$60,966	\$90,104	\$51,560	\$65,534	\$48,782	\$48,349	\$79,026	\$72,669	\$52,225
Educational Attainment - AA degree + (2019)	45.7%	27.9%	36.1%	31.5%	27.4%	25.2%	23.6%	33.3%	26.8%	33.0%	24.0%
Largest Industry (2019)	Government	Health Care	Health Care	Government	Manufacturing	Health Care	Government	Health Care	Government	Government	Manufacturing
Top Growing Industry (2014-2019)	Construction	Construction	Health Care	Manufacturing	Admin & Support	Accom. & Food Service	Transp. & Warehousing	Education	Education	Manufacturing	Construction
Post-secondary Graduates (2019)	7,118	7,193	3,022	4,255	3,043	2,304	3,472	21,873	1,613	10,676	1,677
Educational Pipeline Growth (2014-2019)	10%	24%	-8%	-3%	-2%	-3%	9%	11%	7%	17%	1%

The next chart provides similar data for the Fayetteville MSA. In each case some of the data shows information for build marketing materials and messages, while other points might provide the basis for improved product work.

	Fayetteville NC MSA	Fayetteville AR MSA	Chattanooga TN MSA	Jackson MS MSA	Augusta GA MSA	Wichita KA MSA	Lexington KY MSA	Pensacola FL MSA	Lafayette LA MSA	Huntsville AL MSA	Springfield MO MSA
Population (2019)	524,202	536,673	564,493	588,873	609,132	639,700	522,168	499,552	482,180	467,597	470,821
Population % Growth (2014-2019)	2.6%	11.7%	3.7%	0.3%	4.5%	1.1%	5.4%	6.3%	1.5%	6.2%	4.3%
Employment (2019)	218,643	262,953	281,128	295,013	267,432	329,069	300,024	207,560	221,298	252,224	231,106
Employment % Growth (2014-2019)	2.8%	15.7%	11.1%	3.2%	8.6%	4.3%	5.8%	10.0%	-8.1%	11.8%	8.0%
Employment /Population Ratio (2019)	41.7%	49.0%	49.8%	49.3%	43.9%	51.4%	57.5%	41.5%	45.0%	53.9%	49.1%
Average Earnings per Job (2019)	\$55,758	\$62,340	\$57,231	\$52,283	\$58,732	\$56,863	\$59,155	\$52,661	\$54,614	\$72,025	\$50,753
Cost of Living (U.S. = 100)	93.0	96.6	93.4	88.7	95.4	93.6	96.4	99.4	93.2	95.6	87.5
Gross Regional Product per Capita 2019	\$48,798	\$52,546	\$54,081	\$51,931	\$49,086	\$61,435	\$53,623	\$44,240	\$46,528	\$62,019	\$42,691
Exports Per Capita (2019)	\$111,064	\$49,378	\$68,557	\$83,657	\$76,338	\$69,720	\$63,773	\$55,049	\$45,512	\$132,379	\$42,267
Educational Attainment - AA degree + (2019)	32.8%	35.3%	33.5%	37.8%	33.3%	37.5%	43.5%	39.0%	27.0%	44.4%	34.3%
Largest Industry (2019)	Government	Government	Government	Government	Government	Manufacturing	Government	Government	Health Care	Government	Health Care
Top Growing Industry (2014-2019)	Construction	Health Care	Finance & Insurance	Health Care	Construction	Accom. & Food Service	Health Care	Finance & Insurance	Health Care	Professional & Technical	Health Care
Post-secondary Graduates (2019)	8,549	9,445	5,672	11,603	5,593	9,292	14,343	7,349	6,661	6,446	11,772
Educational Pipeline Growth (2014-2019)	8%	12%	2%	6%	-2%	12%	15%	19%	-1%	16%	3%

Best Practices Examples to Strengthen Competitiveness in North Carolina's Southeast Rural Places - Six Focus Areas

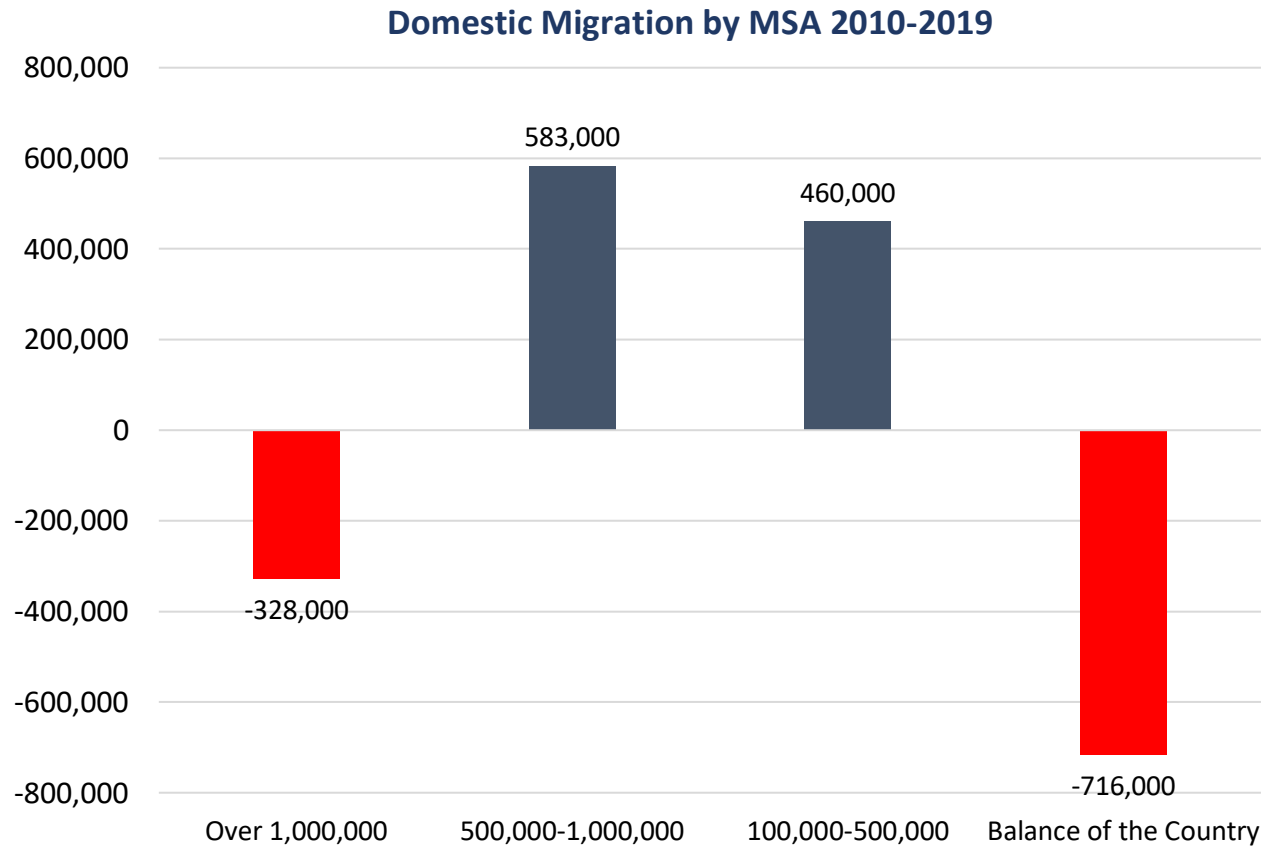


As was shown earlier some parts of North Carolina's Southeast have experienced population decline and struggled more for economic development success. Nationally rural places have been challenged over the past 30 years. **As the chart below from Wendall Cox, in *Newgeography*, shows since 2010, places under 100,000 residents have lost over 700,000 residents while places whose population is between 100,000 and one million have grown.**

Many organizations including the North Carolina Department of Commerce, the Golden LEAF Foundation, and The North Carolina Rural Center focus on improving the economic prosperity in rural North Carolina, including many of the counties in the Southeast. North Carolina's Southeast region plays an important role to attract new investment

The NC Rural Center's mission is to develop, promote, and implement sound economic strategies to improve the quality of life of rural North Carolinians. We serve the state's 80 rural counties, with a special focus on individuals with low to moderate incomes and communities with limited resources.

to these communities but can also share best practices and align activities with other groups to increase efficiency and synergies.



What follows is a national review of some of the best practices to increase rural competitiveness in six specific strategic areas. We provided footnotes in the section so that additional information would be easy to find. The footnotes are included in the Appendix.

1. Prioritize Population Growth, Talent Retention and Attraction

Employers consistently report that finding enough employees with the right skills is their greatest challenge. Improving the economic opportunities in rural and small-town parts of the Southeast region begins with efforts to better retain, attract, and train talent.

Retention:

Research suggests that the best talent and population strategy is to retain young people from small cities, towns, and rural areas. Businesses are extending **career awareness** efforts from high schools into middle schools, and they recommend starting earlier than that. They are getting more directly involved in high school classrooms to identify, target, and “sponsor” young people with work experience and scholarships to technical or four-year college. They

view this one-on-one relationship building with young residents as crucial for retaining them. By developing deeper roots early some portion will see local opportunity and stay.

A related effort is a **“bring them back”** strategy to target North Carolina natives at the stage in life when they are most likely to return to small town North Carolina: young couples who are starting a family or have young children. These are 30 to 35-year-olds in nearby metro areas such as Charlotte, Raleigh and Atlanta. One incentive that is common for young people and young families to consider returning to their hometowns is a student loan repayment or forgiveness program. Several community foundations in Michigan have banded together to create the **Come Home** program, targeted at recent college graduates in a STEAM field.

Another retention strategy is to market locally available jobs to **out-commuters**. In western Wisconsin, Momentum West’s **Regional Talent Initiative** targets residents commuting to the Minneapolis-St. Paul area by highlighting good local jobs and a better work-life balance.

Attraction:

To attract talent, North Carolina’s Southeast could expand a business model that has frequently been used in the agriculture sector: **cooperative or employee ownership** models. Talented young people might be more willing to commit to careers in smaller, rural areas when they have a stake in ownership. Even on a small scale, cooperative ownership can help keep small towns viable. When the local grocery store closed in Walsh, Colorado, townspeople bought it, renovated it, and reopened it.^{xix} Colorado’s Governor stated that employee ownership models are a “best practice in capitalism that leads to better long-term economic growth.”^{xx} Canada, which boasts 8,000 cooperatives employing more than 100,000 people, is putting more money into supporting development of cooperative business ownership.^{xxi}

The lifestyle of small town, and rural North Carolina, will not appeal to everyone, but business interviews suggest that the best strategy is to market quality of life positives such as natural beauty, outdoor recreation, affordability, safety, and being a good place to raise a family. A regional **asset-based strategy** that emphasizes place-making and improving amenities is likely to be successful in attracting those that respond to rural Southeast North Carolina’s appeal. Covid-19 may broaden the number of young people that would see value in a rural lifestyle.

Wisconsin is one state that has aggressively promoted rural growth. The former mining town of Hurley, WI has adopted a **‘community gardening’** model of improvement, focusing on outdoor recreation, trails, and kayaking to create an environment where “people would want to live and launch businesses.”^{xxii} In the Richland County area of southwest Wisconsin, the Southwest Partners non-profit organization led the development of the **Pine River Trails Project**, creating a Pine River corridor that offers “exceptional kayaking, canoeing, tubing, hiking, biking, mountain biking, snowshoeing, camping, and cross-country skilling.”^{xxiii}

Rural areas can have more success by packaging the assets of several towns and cities across a region, and marketing them together. Based on EMSI’s recent Talent Attraction Scorecard,

researchers believe that “bundles of amenities” in many places – “renovated old buildings, coffee shops and good restaurants, music venues, and not least of all, more affordable homes” – have closed the “amenity gap” between superstar big cities and other places.^{xxiv}

Immigrant labor has been historically important for industries such as agriculture and manufacturing. Data supports the contention that immigrants relate to strong economic performance in rural areas. Though not necessarily a cause-and-effect relationship, a 2015 study links greater percentages of foreign-born residents in non-metro counties with higher per capita income, lower unemployment rates, and lower poverty in those communities.^{xxv} A 2018 study of over 2,700 rural places notes that “immigrants are often reversing or mitigating rural population decline,” and that their incomes and tax payments help support public schools and services for retirees. Also, a higher percentage of immigrants were of working age (nearly 80 percent) compared with the U.S.-born population (60 percent).^{xxvi}

Many small towns have been proactive in welcoming foreign-born residents and sponsoring immigrant families. The small city of Worthington, Minnesota hosts an **International Festival**, now in its 28th year. About one-third of Worthington’s population was born overseas, coming from many different nations. The city’s population has grown 17 percent since 2000, and the labor force has grown even faster. Foreign-born residents appreciate the same attributes as native-born citizens: low crime rate, low cost of living, and a short commute. After “decades of experience,” Worthington is seen as a “model of inclusiveness.”^{xxvii}

Elsewhere, the meatpacking towns of Lexington and Madison, Nebraska have focused on **parent engagement** and **ESL classes** in their school districts, leading to high school graduation rates that are “consistently...above the state average of 90 percent.”^{xxviii} A public-private partnership in Lexington is also addressing a housing shortage, which will be discussed later in this report.

Canada’s federal government and provincial governments have aggressively instituted programs to court immigration in rural Canada. These programs have helped change the percentage of immigrants settling outside of major metro areas from 10 percent in 1997 to 40 percent in 2017.^{xxix} Initiatives include:

- The **Atlantic Immigration Pilot** in four maritime provinces, to help employers hire foreign skilled workers and international college graduates. The program has seen over 2,500 applicants in its first three years. It gives applicants a pathway to permanent residency.
- The **Rural and Northern Immigration Pilot**, to address a 23 percent decline in potential workers in rural Canada along with a 40 percent increase in potential retirees. In June 2019, an initial group of 11 communities started testing strategies to attract and retain newcomers who can meet the greatest labor needs.

- An **Agri-Food Permanent Residence Pilot** announced in 2019 to support workforce capacity in agriculture and food processing.^{xxx}

Education and Training:

Educational offerings and school facilities can be keys to community success. When the town of Monticello, Maine (population 750) had to close its elementary school due to lack of funds, students had to travel an additional 14 miles to school, and residents worried that Monticello would become a “ghost town.”^{xxxi} Across America, regions and states are innovating in education and training programs to address goals such as:

- Attracting young families to move to and stay in smaller cities and towns;
- Increasing awareness of in-region careers among students, parents, teachers, and administrators;
- Increasing the workplace readiness of young people and adult workers;
- Improving customized training to help businesses succeed.

Around the United States:

- The **Simulated Workplace** program transforms CTE classrooms in West Virginia high schools into authentic workplace environments. The initiative, less than a decade old, has helped the state to lead the way in “transforming vocational education.” In 2016, 37 percent of seniors in the state completed a CTE program, up from 18 percent in 2010.^{xxxii}
- Realizing that current school counselors are too few and not focused on career readiness, Arkansas is expanding its **College and Career Coach** program. The program supports students from the 7th to 12th grade and incorporates new metrics such as work-based learning and credential attainment. Coaches help with career planning and arranging workplace experiences.
- In 2018, Greene County, Iowa voters passed a historic \$21.5 million bond issue (getting 69 percent of the vote) to create a **regional career academy** to be staffed by Iowa Central Community College.^{xxxiii} The “bold” proposal saw county supervisors step up with \$5 million in financing as well, using tax increment financing (TIF) from wind turbine farms in the county.^{xxxiv} Strands of study at the academy will be in computer software, advanced manufacturing, the culinary arts, and precision agriculture.

The carrot in this proposal was the **Future Ready Iowa** initiative from software company Pillar Technology and its Iowa-native executive, Linc Kroeger. Pillar’s ‘Rural Forge’ mini tech hub opened in Greene County last year, planning to employ 30 people at salaries in the \$55,000 to \$75,000 range.

- Conexus Indiana is a non-profit created in 2017 with business, government, and foundation partners. Conexus' talent programs include **Catapult Indiana** to teach adults the basic work skills needed for manufacturing jobs. The four week, 160-hour work-and-learn program has had more than 3,000 completers and is offered in small towns such as Greensburg (population 12,000).^{xxxv}
- Last year, Virginia allocated \$7 million to launch a new, **customized workforce recruitment and training program**, based on the highly regarded Quick Start in Georgia and FastStart in Louisiana. Training will be provided through the state's community college system. The head of Virginia's economic development partnership says that these training programs are "particularly powerful for the smaller metro and rural regions, where companies are worried about finding enough quality talent."^{xxxvi}
- In northwestern Wisconsin, the **Gold Collar Careers** website is targeted at middle and high school students, parents, and teachers to help them understand manufacturing career opportunities in their own region. Gold Collar Careers was started by the Manufacturing Works volunteer group. The website advertises a 100 percent placement rate for post-secondary program completers, 25 percent higher average incomes, and job security.^{xxxvii}

2. Continue to Aggressively Expand Rural Broadband

High-speed internet service has become as essential to commerce as electricity, water and sewer. Students in rural Southeast North Carolina school districts operate in the same modern interconnected world as students in Raleigh's suburbs or downtown Charlotte.

There appears to be no magic bullet solution for extending broadband to all rural areas. The technology will likely need to be a mix of buried fiber and wireless. **Because of the economics of serving low-density areas, public and private sector participation will both be needed. It will also require involvement at the federal, state, and local levels.**

National Broadband Initiatives:

The FCC's **Universal Service Fund** is a major source of funds for expanding telecommunications. Early in 2020, the FCC unveiled its new **Rural Digital Opportunity Fund (RDOF)**, providing \$20 billion for telecom companies to compete for service extension projects. The first RDOF auction is scheduled for October 2020.^{xxxviii}

USDA Rural Development has been increasing broadband loan and grant programs. In the fall of 2019, a rural Wisconsin telecom provider received \$8 million in loans for fiber upgrades in two small communities. Late last year, the USDA's new **ReConnect Pilot Program** announced its first round of investments. Alabama received a major share – over \$62 million in a combination of grants and loans for four sizable projects.^{xxxix}

North Carolina's Broadband Infrastructure Office has a team of four technical assistance experts to help communities develop projects. **Tennessee's** Broadband Accessibility Grant Program provides up to 50 percent of last-mile project costs, up to \$2 million per project. Starting in 2016, **West Virginia** has diverted some of its Community Development Block Grant (CDBG) funds from traditional water & sewer projects to broadband expansion.

In late 2019 the USDA invested \$7.9 million in high-speed broadband infrastructure to improve connectivity for more than 4,000 residents, farms, businesses, first responders and schools in Columbus County. Atlantic Telephone Membership Corporation's Faster Columbus Advanced Connectivity for Communities, Education, Safety and Support (ACCESS) project will use the \$7.9 million to bring fiber-optic broadband into unserved and underserved rural areas of Columbus County.

Also in late 2019 USDA invested \$23.7 million in high-speed broadband infrastructure to improve rural connectivity for nearly 8,750 rural households in North Carolina. Star Telephone Membership Corporation of Clinton, N.C., will use the grant funding to deploy a fiber-to-the-home (FTTH) broadband network. The project will serve 8,749 households, 19 businesses, 10 educational facilities, and three critical community facilities.

In September 2020, the U.S. Department of Agriculture awarded Atlantic Telephone Membership Corp's (ATMC) a \$21.6 million grant to enable the expansion of high-speed internet access to over 7,000 addresses in rural Pender County. The ReConnect Grant allows the ATMC to bring Gigabit broadband internet access to close to 7,000 residential residents, over, 19 educational facilities, 285 businesses, nine healthcare facilities, 15 critical community facilities, and 209 agricultural operations. ATMC will match the Grant funds with \$7.2 million for a total project investment of \$28.9 million.

3. Expand Support & Champion Innovation for Legacy Industries and Entrepreneurs

Legacy sectors such as farming and manufacturing remain important to rural North Carolina's economy, but each face major challenges. What can the Southeast do? There are examples of innovative ways to build upon the scale and strength of legacy industries.

Promote Additional Exporting:

Many of the region's manufacturers and food producers are small to medium-sized, and few of those tap into international markets. Support from NCPED and the US Department of Commerce can be directed to firms with an interest.

Promote Cooperative Business Ownership:

As noted in the Talent Attraction section, cooperative ownership models have a long history in agriculture, and could be promoted to help businesses scale, as well as attract, a new

generation of business leadership. Young people might be more motivated to work in farming and manufacturing if they see a clear path to ownership.

Invest More in Manufacturing Workforce Training:

South Carolina launched the **ManufirstSC** program in 2018 to allow adults without manufacturing work experience to earn a basic skills certificate. This is similar to the Catapult Indiana adult skill training noted earlier in the Education and Training section. The 62-hour ManufirstSC program had about 1,000 completions in its first year, and over 100 firms recognize the certificate. The curriculum was based on training initially developed for Volvo Car USA, and addresses a need particularly for “rural residents who’d had limited access to manufacturing jobs.”^{xi}

Be a Clearinghouse for Flexible Employment Models:

Another promising workforce innovation is greater **employee sharing**. With dire shortages in the skilled trades, many manufacturers need electricians, welders, plumbers, and other maintenance personnel. However, employers might not need all of these skilled tradespeople on a full-time basis. Sharing of skilled workers among several companies can keep these workers in rural areas and maximize their earning potential while firms share the costs.

New Business Development:

Even though small towns in some states have a higher number of new businesses per capita, and the business survival rate is better in rural areas,^{xii} stakeholders that were interviewed felt that spurring new business development in rural areas is a difficult challenge in today’s environment. It would involve bucking the long-term trend of declining business dynamism in America, and startups would need to find quality employees in a very tight labor market. The general consensus among interviewees was, ‘Our existing bigger businesses can’t find or keep good workers, how are new businesses going to find people?’

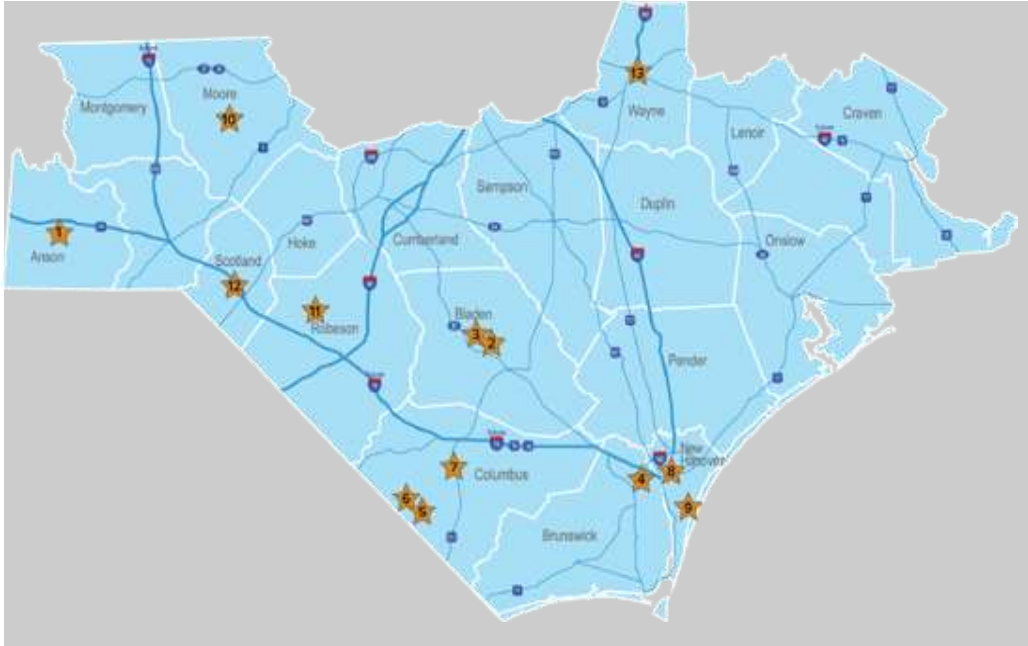
Despite the challenges, we believe that smaller towns in the Southeast can be an appealing place for the true entrepreneur: the individual, couple, or family wanting to start a business. Smaller cities and towns can increase their attractiveness to startups through the same asset-based approach used in talent attraction and retention – improving downtowns, schools, trails and recreation, culture and the arts. It is a strategy focused on “what a community has, rather than what it doesn’t have.”^{xiii}

The region has some strong existing incubators, and a new program getting off the ground which will be an incubator and entrepreneur network. The recently completed incubator guide shows that the communities across Southeastern North Carolina are



“leveraging a broad menu of technical, spatial, financial, organizational and leadership resources to create incubators and address specific challenges and embrace opportunities...”

North Carolina's Southeast Incubator Locations



Beyond that, entrepreneurship benefits from a range of support services that can be provided at the local, regional, and/or state levels. These services include access to capital, business training classes, networking and mentoring. Recent immigrants in particular, who typically start businesses at higher rates, can benefit from small business training and understanding regulations. Below are entrepreneurship development examples from across America.

- In 2002, **Ohio Third Frontier** was started to provide early-stage investment capital to support technology innovation throughout the state. To date, Ohio Third Frontier has invested over \$2 billion, with funding through voter-approved bond issues.^{xliii} During its first 10 years it was credited with supporting 600 businesses, adding 60,000 jobs to the state, and leveraging more than \$5 billion in private investment.^{xliv}
- Within Ohio, an early investment through the Third Frontier was made in the **Youngstown Business Incubator (YBI)**, located in the struggling industrial city of 65,000. YBI portfolio company Turning Technologies was named the fastest-growing company in the U.S. by Inc. Magazine in 2007, and in 2014 YBI was named the best university-affiliated business incubator in the world. YBI currently occupies five historic buildings in downtown Youngstown and has 75 firms in its portfolio.^{xlv}
- Some localities are working with microlenders to provide **small business loans**. Rochester, NY partnered with Kiva, the world's largest crowdfunded microlender, to offer loans up to

\$10,000, to be repaid in one to three years at no interest. Entrepreneurs must gather a number of \$25 commitments from family and friends before their business pitch is broadcast through Kiva.^{xlvi}

- In northwest Wisconsin, the **Wisconsin Rural Enterprise Fund (WREF)** makes equity investments in startup companies, especially those with the potential to create higher-skill, higher-wage jobs. Since it started in 2002, WREF has made over \$2,000,000 in investments ranging from \$35,000 to \$200,000 each. Investors include economic development organizations, cities, and electric cooperatives.^{xlvii} WREF is managed by the Wisconsin Business Innovation Corporation, an offshoot of the Northwest Regional Planning Commission.

4. Develop New Housing Strategies and Financing for Small Towns

The lack of housing choices can be a deterrent in individual and family location decisions. Small cities, towns, and employers are looking for ways to spur anything new in the housing market: new apartments, new single-family homes, and young buyers to purchase them. Here are some innovative ideas from around the country.

- Nearly 75 percent of Duluth, Minnesota's housing is at least 46 years old.^{xlviii} Duluth is hoping that giving away small parcels of land to developers or builders who design a "good, achievable idea that can provide affordable housing" will be a "micro-solution" for the city's housing shortage. The city is starting with 13 sites in the **Rebuild Duluth** program and is requiring applications with realistic timelines and budgets, but not imposing any income restrictions or affordability requirements.^{xlix}

Duluth has also made zoning changes recently to allow narrower homes with smaller setbacks. It hopes that these changes, along with free land, might "create a model that works" for infill development. One builder believes that it will at least "have a positive impact on upfront costs" to make small projects in smaller cities more feasible.^l The initial round of 13 free land awards will be announced in the spring of 2020.

- Housing shortages created tensions in the growing, multi-cultural meatpacking town of Lexington, Nebraska (population 10,000). To address this, local employer Tyson Foods and city leadership agreed in 2013 to **collaborate to build 900 new housing units by 2030**. Tyson will reimburse the city's housing authority for land purchases. Two hundred new units were completed as of 2018.^{li}
- Grant County is a central Indiana county of about 66,500 people, located between Indianapolis and Fort Wayne, and near college towns like Muncie. Grant has adopted two programs to attract new residents. Since 2012, the **Grant For Grads** initiative has helped

about 60 college graduates to buy or rent within the county. It provides home buyers up to \$5,000 for down payment or closing costs, and renters a 20 percent rent reduction up to a total of \$2,500. Grant For Grads is a creation of the county's Economic Growth Council and the county's Affordable Housing & Community Development Corporation.^{lii}

Grant County, IN also offers the **Grant's Got Talent** relocation assistance program for people accepting a job within the county. It provides up to \$7,500 in down payment assistance for college graduates (associate degree or higher) taking a full-time job in one of three targeted fields and moving into the community.^{liii}

- Similar to the county program in Indiana, the statewide **Ohio Housing Finance Agency** has a **Grants for Grads** initiative offering 2.5 percent to five percent down payment assistance for those who graduated with at least an associate degree in the past 48 months. Recipients must take free homebuyer education classes, and the down payment assistance is forgiven if the homeowner remains in Ohio for five years.^{liv}

5. Strengthen Rural Healthcare

This report has several sections that address healthcare. It is that important to the region's future. **For the past 30 years researchers have been writing about the series of factors that have converged to threaten rural health care services.** Competition for health professionals from better-financed urban providers, the shift to outpatient facilities, and slow or negative patient growth have combined to create a crisis across much of rural America.

The most high-profile impacts of rural population loss on healthcare have been the closing of hospitals and other reductions in available medical services. In America, more hospitals have closed than opened each year since 2011.^{lv} Data collected by the Rural Health Research Program indicates that 41 percent of rural hospitals have a negative operating profit margin.^{lvi} Other research by Navigant, looking across 12 Midwestern states, concluded that 18 percent of rural hospitals in those states were at high risk of closing.^{lvii} **A recent study found that when a community loses its only hospital, per capita income falls about four percent and the unemployment rate rises by 1.6 percent.**^{lviii}

Medical Facility Solutions:

- Due to declining and aging populations, fewer rural hospitals are able to provide a full range of services, such as obstetrics. Hospitals such as one in Iowa Falls, Iowa (population 5,000) are addressing this with **"share care"** agreements in which patients receive routine prenatal care locally and are transferred to larger hospitals for late-term care and delivery.^{lix} Other agreements have small town facilities hosting specialists from larger hospitals on a weekly or monthly basis to bring specialized outpatient care to rural areas.

- Communities are tapping a wide variety of funding sources to **create the next generation of facilities** aligned with current rural healthcare needs. The new medical campus in Rock Rapids, Iowa has space for same-day primary care appointments, telehealth services, visiting specialists, and a therapy gym. The \$29 million facility opened in 2019 and was funded through community donations, hospital association funding, and a USDA loan.^{lx} Other pilot projects are positioning rural hospitals “at the center of healthy communities,” with various providers on-site to offer outpatient services, behavioral health, and meals programs.^{lxi}
- Partnerships between health systems and local communities are closing care gaps in rural areas. In McCook, Nebraska, Bryan Health is working with local fire departments to schedule **paramedic visits to high-risk patients in their homes** after discharge from the local hospital. These home checks ensure that the home environment is safe and conducive to recovery, and paramedics deliver some follow-up care.^{lxii}
- **School-based health centers** are being improved to deliver care to children, and more rural communities are delivering **mental health services in schools** as well.
- Proposed federal legislation would **free rural hospitals from the requirement to maintain inpatient beds**. Under the new Medicare classification of a Rural Emergency Hospital, small facilities could focus on emergency care, primary care, and outpatient services. The Rural Emergency Acute Care Hospital (REACH) Act was last introduced in 2017 but died in committee.^{lxiii}

Attracting and Retaining Healthcare Professionals:

Getting medical professionals (including mental health professionals) – especially younger ones – to come to and stay in rural areas is a particular challenge. This includes doctors, physician assistants, nurse practitioners, and nurses. At the least, it requires the same place-making needed to attract anyone. As one healthcare executive noted, necessary amenities include good broadband and cell phone service, and businesses that add to the quality of life. Places that cannot attract medical professionals will have a harder time appealing to other families, all of whom want quality healthcare nearby.

Most states have at least one incentive program aimed at increasing the number of doctors and other medical staff in rural and other hard-to-serve areas. However, uneven funding means that many programs are inactive in any given year. The most common effort is to entice foreign physicians to make a three year commitment in a rural area through a J-1 Visa waiver program. But numerous states have additional incentives:

- **Oregon’s Rural Practitioner Tax Credit Program** offers personal income tax credits for doctors, nurses, optometrists, and others – even volunteer EMS personnel are eligible.

Oregon also **subsidizes medical malpractice insurance premiums** for doctors and nurse practitioners working in rural parts of the state.^{lxiv}

- The University of Missouri School of Medicine has had a **Rural Track Pipeline** program for 20 years. The Rural Track Pipeline includes scholarships for students from rural areas, clinical rotations at rural hospitals, and a week-long immersion program to introduce students to small town life.^{lxv}
- Through the **West Virginia Rural Health Service Program**, third and fourth year medical students at one of the state's medical schools can receive up to \$25,000 in scholarship money in exchange for agreeing to practice in a rural part of the state for at least 2 years after completing residency.^{lxvi}
- **Western Montana's Student Rural Clinical Rotations Program** provides travel reimbursement money for medical students to do clinical rotations in rural areas.

Research by Economic Leadership indicates that these programs can be effective in attracting and retaining health professionals. Some best practices that we have found:

1. Money talks! Cash-based incentives are effective, though they must be significant enough to make a difference (usually at least \$10,000 per year for multiple years).
2. Targeting those with rural or small-town backgrounds is usually more effective.
3. Mid-level health professionals (such as physician assistants and nurse practitioners) may be more likely to stay in rural areas.
4. Spreading payments out over several years gives more time for the recipient to become attached to the community, and thus more likely to stay.

6. Support Rural Leaders and Incent Regional Cooperation

North Carolina's 100 counties and over 530 incorporated municipalities can make regional coordination and action difficult. Too often, local leaders view neighboring communities as competitors, when in reality few small towns and cities have all the assets they need to succeed and could benefit greatly from collaboration. Increasingly, states are realizing that economic development is primarily a regional undertaking. Fortunately, there are a number of good examples of regional cooperation in rural areas of the United States, including North Carolina's Southeast.

- Alabama has unveiled a **Rural Development Initiative** to include a custom economic development strategy in each of five regions across the state. Each region will get assistance in crafting a strategic plan addressing infrastructure, workforce, education, and other priorities, with the goal of capitalizing on "existing assets and infrastructure."^{lxvii}

Steering committee members for the Rural Development Initiative include major players Alabama Power, RegionsBank, Blue Cross and Blue Shield of Alabama, the state Department of Commerce, and the Economic Development Association of Alabama (EDAA). The group is chaired by a former speaker of the state's House of Representatives. In addition, both the Department of Commerce and EDAA have hired a rural development specialist, and the state had its first Rural Economic Development Conference in January 2020.^{lxviii}

- As promoted by the National League of Cities, **improving rural-urban linkages** can benefit both areas. NLC reports that rural areas connected to a larger hub have higher incomes, lower median ages, higher population growth, and greater educational attainment than rural areas that are more isolated.^{lxix} A particular strategy is to look at industry clusters in a broader way, considering rural areas and nearby metro areas together. The greater Sacramento, California region has seen success with its regional food and agriculture cluster, and for the GO Virginia initiative discussed below, one rural region is positioning itself to take advantage of supply chain needs for clusters in seven nearby metro areas.^{lxx}

GO Virginia was started by business leaders in 2015 to spur regional private-sector growth with the state government serving as a “catalyst and partner.” Each of the nine regions across Virginia has a business-led Regional Council that submits collaborative economic development proposals to a state-level board.^{lxxi} Initial funding of \$28 million from the Virginia General Assembly included money for each region to create a Growth & Diversification Plan.

Thus far, 74 projects have been approved with a total allocation of \$38 million. A recent example is \$300,000 for an area in southwest Virginia covering 13 counties and five independent cities. The non-profit Valleys Innovation Council received the grant to create a Regional Entrepreneurship Initiative focused on high-growth sectors such as health care, advanced manufacturing, and cybersecurity.^{lxxii}

- In the northwestern corner of South Carolina, the **Upstate SC Alliance** was formed in 2000 to give its 10 counties opportunities “we wouldn’t be able to capture on our own.” The Alliance pools resources “for workforce, transportation, utilities, healthcare, and quality of life.” The public-private Alliance has about 170 business and government investors.^{lxxiii}
- Since most areas do not have a regional government with any power, a new study by The Aspen Institute suggests finding different organizations that can act as **Rural Development Hubs**. These are often community foundations, community development financial institutions (CDFIs), community colleges, or four year colleges. These “place-rooted organizations” can help to bridge local silos and attract other investors. Other strengths of a good Rural Development Hub include the willingness to task risks and make long-term

commitments to a region.^{lxxiv}

- **Regional branding and marketing for rural tourism** is increasingly popular. Rural areas can succeed when they put together a “destination mix” with five components: 1) attractions; 2) infrastructure; 3) accommodations; 4) transportation; and 5) hospitality training.^{lxxv} Examples include:
 - ♦ **The Mississippi Blues Trail** along U.S. Highway 61;
 - ♦ **The Crooked Road**, Virginia’s music heritage trail, including 19 counties, four cities, and 54 towns along a 300-mile trail;
 - ♦ Kentucky’s **Bourbon Trail**, with 18 distilleries to visit on the original trail and 19 more on the Craft Tour;
 - ♦ **Old West Country** in southwestern New Mexico, home of the nation’s first official wilderness area.

- Regional cooperation should include **leadership development**. Since 2016 the North Carolina Rural Center has offered the **Homegrown Leaders** program to help emerging leaders understand data and trends, community economic development, collaboration skills; and how to access resources. Peer-learning networks are another important component. In Nebraska, the **Building Entrepreneurial Communities Act** offers grants for two or more communities collaborating on capacity-building efforts including leadership development.

Final Thoughts

North Carolina’s Southeast region enjoys many competitive advantages. The North Carolina business climate is always ranked among the best in the country. The region’s roadways, rail, airports, and seaports provide excellent support to the region’s businesses. Universities, community colleges and other training facilities have the capacity and focus to build the workforce skills the region needs. The region’s military bases, major private businesses and hospitals are anchor institutions critical to future success.

Even with these assets sustained success is a challenge. Change is disruptive, and competition is fierce. Remaining competitive requires business and government leadership working together to promote the region and its assets and to continue to improve the region’s product. Targeted marketing, improved broadband, sustained high-quality healthcare, skilled workers, and a focus on the future are all necessary. North Carolina’s Southeast plays a critical role and must balance available resources, investor expectations and results.

Appendix 1: Workforce Analysis

Workforce Summary – North Carolina’s Southeast (18-Counties)

Population (2019)	1,836,745
Population Growth 2014-2019	52,528
Projected Population Growth 2019-2024	44,325
Total Employment (2019)	802,319
Job Growth 2014-2019	34,893
Projected Job Growth 2019-2024	26,623
Average Earners Per Job	\$51,100
Labor Force (2019)	765,706
Cost of Living	93.6
% of Workforce with a High School Diploma	85.6%
% of Workforce with a Bachelors Degree of Higher	23.2%

Largest Industries

- 1) Government
- 2) Retail Trade
- 3) Health Care and Social Assistance
- 4) Accommodation and Food Services
- 5) Manufacturing

Top Growth Industries

- 1) Accommodation and Food Services
- 2) Construction
- 3) Manufacturing
- 4) Retail Trade
- 5) Other Services

Largest Occupations

- 1) Office and Administrative Support
- 2) Sales and Related
- 3) Food Preparation and Serving
- 4) Transportation and Material Moving
- 5) Production

Top Growth Occupations

- 1) Food Preparation and Serving
- 2) Transportation and Material Moving
- 3) Business and Financial Operations
- 4) Construction and Extraction
- 5) Healthcare Practitioners and Technical

Workforce Summary – Anson County, North Carolina

Population (2019)	24,641
Population Growth 2014-2019	(-1,333)
Projected Population Growth 2019-2024	(-605)
Total Employment (2019)	8,236
Job Growth 2014-2019	(-352)
Projected Job Growth 2019-2024	233
Average Earners Per Job	\$43,055
Labor Force (2019)	10,925
Cost of Living	95.0
% of Workforce with a High School Diploma	78.7%
% of Workforce with a Bachelors Degree of Higher	8.7%

Largest Industries

- 1) Government
- 2) Manufacturing
- 3) Retail Trade
- 4) Health Care & Social Assistance
- 5) Transportation & Warehousing

Top Growth Industries

- 1) Transportation & Warehousing
- 2) Construction
- 3) Agriculture, Forestry, Fishing, Hunting
- 4) Manufacturing
- 5) Management of Companies

Largest Occupations

- 1) Production
- 2) Transportation and Material Moving
- 3) Office and Administrative Support
- 4) Sales and Related
- 5) Education Instruction & Library

Top Growth Occupations

- 1) Transportation and Material Moving
- 2) Construction and Extraction
- 3) Farming, Fishing & Forestry
- 4) Management
- 5) Healthcare Support

Workforce Summary – Bladen County, North Carolina

Population (2019)	33,003
Population Growth 2014-2019	(-1,383)
Projected Population Growth 2019-2024	(-729)
Total Employment (2019)	14,867
Job Growth 2014-2019	1,166
Projected Job Growth 2019-2024	621
Average Earners Per Job	\$44,198
Labor Force (2019)	14,782
Cost of Living	94.8
% of Workforce with a High School Diploma	78.9%
% of Workforce with a Bachelors Degree of Higher	13.5%

Largest Industries

- 1) Manufacturing
- 2) Government
- 3) Agriculture, Forestry, Fishing, Hunting
- 4) Support & Waste Management
- 5) Retail Trade

Top Growth Industries

- 1) Manufacturing
- 2) Support & Waste Management
- 3) Accommodation & Food Service
- 4) Construction
- 5) Educational Services

Largest Occupations

- 1) Production
- 2) Transportation and Material Moving
- 3) Building & Grounds Maintenance
- 4) Office & Administrative Support
- 5) Sales and Related

Top Growth Occupations

- 1) Building & Grounds Maintenance
- 2) Production
- 3) Transportation and Material Moving
- 4) Construction and Extraction
- 5) Installation, Maintenance & Repair

Workforce Summary – Brunswick County, North Carolina

Population (2019)	140,170
Population Growth 2014-2019	21,862
Projected Population Growth 2019-2024	14,797
Total Employment (2019)	38,705
Job Growth 2014-2019	4,627
Projected Job Growth 2019-2024	3,325
Average Earners Per Job	\$47,573
Labor Force (2019)	53,137
Cost of Living	91.0
% of Workforce with a High School Diploma	88.8%
% of Workforce with a Bachelors Degree of Higher	27.7%

Largest Industries

- 1) Government
- 2) Retail Trade
- 3) Accommodation and Food Services
- 4) Health Care & Social Assistance
- 5) Construction

Top Growth Industries

- 1) Retail Trade
- 2) Accommodation and Food Services
- 3) Construction
- 4) Government
- 5) Health Care & Social Assistance

Largest Occupations

- 1) Food Preparation and Serving
- 2) Sales and Related
- 3) Office and Administrative Support
- 4) Transportation and Material Moving
- 5) Construction and Extraction

Top Growth Occupations

- 1) Food Preparation and Serving
- 2) Transportation and Material Moving
- 3) Construction and Extraction
- 4) Educational Instruction and Library
- 5) Sales and Related

Workforce Summary – Columbus County, North Carolina

Population (2019)	55,419
Population Growth 2014-2019	(-1,458)
Projected Population Growth 2019-2024	(-977)
Total Employment (2019)	17,420
Job Growth 2014-2019	(-460)
Projected Job Growth 2019-2024	105
Average Earners Per Job	\$42,596
Labor Force (2019)	23,137
Cost of Living	90.9
% of Workforce with a High School Diploma	78.6%
% of Workforce with a Bachelors Degree of Higher	13.0%

Largest Industries

- 1) Government
- 2) Health Care and Social Assistance
- 3) Retail Trade
- 4) Manufacturing
- 5) Support & Waste Management

Top Growth Industries

- 1) Construction
- 2) Accommodation and Food Services
- 3) Management of Companies
- 4) Professional, Scientific and Technical Services
- 5) Transportation and Warehousing

Largest Occupations

- 1) Office and Administrative Support
- 2) Sales and Related
- 3) Production
- 4) Transportation and Material Moving
- 5) Food Preparation and Serving

Top Growth Occupations

- 1) Construction and Extraction
- 2) Food Preparation and Serving
- 3) Architecture and Engineering
- 4) Business and Financial Operations
- 5) Computer and Mathematical

Workforce Summary – Craven County, North Carolina

Population (2019)	102,668
Population Growth 2014-2019	(-1,413)
Projected Population Growth 2019-2024	(-104)
Total Employment (2019)	50,961
Job Growth 2014-2019	719
Projected Job Growth 2019-2024	242
Average Earners Per Job	\$54,969
Labor Force (2019)	41,904
Cost of Living	96.9
% of Workforce with a High School Diploma	87.9%
% of Workforce with a Bachelors Degree of Higher	25.4%

Largest Industries

- 1) Government
- 2) Retail Trade
- 3) Health Care and Social assistance
- 4) Accommodation and Food Services
- 5) Manufacturing

Top Growth Industries

- 1) Manufacturing
- 2) Retail Trade
- 3) Accommodation and Food Services
- 4) Other Services
- 5) Construction

Largest Occupations

- 1) Office and Administrative Support
- 2) Sales and Related
- 3) Food Preparation and Serving
- 4) Transportation and Material Moving
- 5) Military-only

Top Growth Occupations

- 1) Business and Financial Operations
- 2) Food Preparation and Serving
- 3) Healthcare Practitioners and Technical
- 4) Architecture and Engineering
- 5) Installation, Maintenance and Repair

Workforce Summary – Cumberland County, North Carolina

Population (2019)	332,466
Population Growth 2014-2019	70
Projected Population Growth 2019-2024	1,083
Total Employment (2019)	178,379
Job Growth 2014-2019	1,676
Projected Job Growth 2019-2024	2,023
Average Earners Per Job	\$58,590
Labor Force (2019)	128,172
Cost of Living	93.6
% of Workforce with a High School Diploma	90.0%
% of Workforce with a Bachelors Degree of Higher	23.4%

Largest Industries

- 1) Government
- 2) Retail Trade
- 3) Accommodation and Food Services
- 4) Health Care and Social Assistance
- 5) Other Services

Top Growth Industries

- 1) Construction
- 2) Accommodation and Food Services
- 3) Health Care and Social Assistance
- 4) Retail Trade
- 5) Other Services

Largest Occupations

- 1) Military-only
- 2) Office and Administrative Support
- 3) Sales and Related
- 4) Food Preparation and Serving
- 5) Transportation and Material Moving

Top Growth Occupations

- 1) Business and Financial Operations
- 2) Food Preparation and Serving
- 3) Healthcare Practitioners and Technical
- 4) Construction and Extraction
- 5) Transportation and Material Moving

Workforce Summary – Duplin County, North Carolina

Population (2019)	58,873
Population Growth 2014-2019	(-568)
Projected Population Growth 2019-2024	157
Total Employment (2019)	22,087
Job Growth 2014-2019	(-1,249)
Projected Job Growth 2019-2024	(-366)
Average Earners Per Job	\$43,558
Labor Force (2019)	25,974
Cost of Living	93.1
% of Workforce with a High School Diploma	73.5%
% of Workforce with a Bachelors Degree of Higher	11.3%

Largest Industries

- 1) Manufacturing
- 2) Government
- 3) Agriculture, Forestry, Fishing, Hunting
- 4) Retail Trade
- 5) Health Care and Social assistance

Top Growth Industries

- 1) Manufacturing
- 2) Government
- 3) Construction
- 4) Transportation and Warehousing

Largest Occupations

- 1) Production
- 2) Transportation and Material Moving
- 3) Office and Administrative Support
- 4) Management
- 5) Farming, Fishing and Forestry

Top Growth Occupations

- 1) Transportation and Material Moving
- 2) Production
- 3) Construction and Extraction
- 4) Community and Social Service
- 5) Installation, Maintenance and Repair

Workforce Summary – Hoke County, North Carolina

Population (2019)	55,620
Population Growth 2014-2019	4,032
Projected Population Growth 2019-2024	3,261
Total Employment (2019)	10,310
Job Growth 2014-2019	1,339
Projected Job Growth 2019-2024	840
Average Earners Per Job	\$42,798
Labor Force (2019)	20,265
Cost of Living	89.1
% of Workforce with a High School Diploma	85.7%
% of Workforce with a Bachelors Degree of Higher	17.6%

Largest Industries

- 1) Government
- 2) Manufacturing
- 3) Health Care and Social Assistance
- 4) Retail Trade
- 5) Construction

Top Growth Industries

- 1) Government
- 2) Manufacturing
- 3) Health Care and Social Assistance
- 4) Construction
- 5) Transportation and Warehousing

Largest Occupations

- 1) Production
- 2) Educational Instruction and Library
- 3) Office and Administrative Support
- 4) Transportation and Material Moving
- 5) Sales and Related

Top Growth Occupations

- 1) Office and Administrative Support
- 2) Transportation and Material Moving
- 3) Healthcare Practitioners & Technical
- 4) Production
- 5) Protective Service

Workforce Summary – Lenoir County, North Carolina

Population (2019)	55,570
Population Growth 2014-2019	(-2,692)
Projected Population Growth 2019-2024	(-1,833)
Total Employment (2019)	31,079
Job Growth 2014-2019	951
Projected Job Growth 2019-2024	543
Average Earners Per Job	\$47,346
Labor Force (2019)	28,070
Cost of Living	97.0
% of Workforce with a High School Diploma	78.4%
% of Workforce with a Bachelors Degree of Higher	13.3%

Largest Industries

- 1) Manufacturing
- 2) Government
- 3) Health Care and Social Assistance
- 4) Retail Trade
- 5) Construction

Top Growth Industries

- 1) Manufacturing
- 2) Construction
- 3) Transportation and Warehousing
- 4) Professional, Scientific & Technical Services
- 5) Other Services

Largest Occupations

- 1) Production
- 2) Office and Administrative Support
- 3) Transportation and Material Moving
- 4) Sales and Related
- 5) Food Preparation and Serving

Top Growth Occupations

- 1) Production
- 2) Transportation and Material Moving
- 3) Construction and Extraction
- 4) Installation, Maintenance & Repair
- 5) Educational Instruction and Library

Workforce Summary – Montgomery County, North Carolina

Population (2019)	27,261
Population Growth 2014-2019	(-29)
Projected Population Growth 2019-2024	(-95)
Total Employment (2019)	10,333
Job Growth 2014-2019	283
Projected Job Growth 2019-2024	202
Average Earners Per Job	\$45,081
Labor Force (2019)	11,489
Cost of Living	95.8
% of Workforce with a High School Diploma	77.8%
% of Workforce with a Bachelors Degree of Higher	13.4%

Largest Industries

- 1) Manufacturing
- 2) Government
- 3) Health Care and Social Assistance
- 4) Retail Trade
- 5) Construction

Top Growth Industries

- 1) Manufacturing
- 2) Support and Waste Management
- 3) Construction
- 4) Finance and Insurance
- 5) Other Services

Largest Occupations

- 1) Production
- 2) Transportation and Material Moving
- 3) Office and Administrative Support
- 4) Sales and Related
- 5) Healthcare Practitioners & Technical

Top Growth Occupations

- 1) Healthcare Practitioners and Technical
- 2) Production
- 3) Sales and Related
- 4) Healthcare Support
- 5) Construction and Extraction

Workforce Summary – Moore County, North Carolina

Population (2019)	100,012
Population Growth 2014-2019	7,188
Projected Population Growth 2019-2024	5,349
Total Employment (2019)	41,263
Job Growth 2014-2019	4,209
Projected Job Growth 2019-2024	3,040
Average Earners Per Job	\$47,712
Labor Force (2019)	42,403
Cost of Living	97.1
% of Workforce with a High School Diploma	90.7%
% of Workforce with a Bachelors Degree of Higher	35.3%

Largest Industries

- 1) Health Care and Social Assistance
- 2) Accommodation and Food Services
- 3) Government
- 4) Retail Trade
- 5) Construction

Top Growth Industries

- 1) Health Care and Social Assistance
- 2) Accommodation and Food Services
- 3) Retail Trade
- 4) Other Services
- 5) Construction

Largest Occupations

- 1) Office and Administrative Support
- 2) Food Preparation and Serving
- 3) Healthcare Practitioners and Technical
- 4) Sales and Related
- 5) Healthcare Support

Top Growth Occupations

- 1) Food Preparation and Serving
- 2) Healthcare Practitioners and Technical
- 3) Personal Care and Service
- 4) Sales and Related
- 5) Healthcare Support

Workforce Summary – New Hanover County, North Carolina

Population (2019)	235,984
Population Growth 2014-2019	19,987
Projected Population Growth 2019-2024	14,008
Total Employment (2019)	129,682
Job Growth 2014-2019	15,906
Projected Job Growth 2019-2024	9,388
Average Earners Per Job	\$54,753
Labor Force (2019)	125,535
Cost of Living	97.8
% of Workforce with a High School Diploma	91.3%
% of Workforce with a Bachelors Degree of Higher	39.1%

Largest Industries

- 1) Government
- 2) Accommodation and Food Services
- 3) Retail Trade
- 4) Health Care and Social Assistance
- 5) Construction

Top Growth Industries

- 1) Construction
- 2) Accommodation and Food Services
- 3) Government
- 4) Professional, Scientific & Technical Services
- 5) Health Care and Social Assistance

Largest Occupations

- 1) Food Preparation and Serving
- 2) Office and Administrative Support
- 3) Sales and Related
- 4) Healthcare Practitioners and Technical
- 5) Transportation and Material Moving

Top Growth Occupations

- 1) Food Preparation and Serving
- 2) Construction and Extraction
- 3) Management
- 4) Healthcare Practitioners and Technical
- 5) Transportation and Material Moving

Workforce Summary – Onslow County, North Carolina

Population (2019)	198,805
Population Growth 2014-2019	6,974
Projected Population Growth 2019-2024	6,715
Total Employment (2019)	102,494
Job Growth 2014-2019	3,584
Projected Job Growth 2019-2024	3,312
Average Earners Per Job	\$50,106
Labor Force (2019)	65,958
Cost of Living	97.7
% of Workforce with a High School Diploma	91.5%
% of Workforce with a Bachelors Degree of Higher	20.1%

Largest Industries

- 1) Government
- 2) Retail Trade
- 3) Accommodation and Food Services
- 4) Support and Waste Management
- 5) Health Care and Social Assistance

Top Growth Industries

- 1) Government
- 2) Accommodation and Food Services
- 3) Professional, Scientific & Technical Services
- 4) Other Services
- 5) Retail Trade

Largest Occupations

- 1) Military-only
- 2) Office and Administrative Support
- 3) Food Preparation and Serving
- 4) Sales and Related
- 5) Transportation and Material Moving

Top Growth Occupations

- 1) Business and Financial Operations
- 2) Transportation and Material Moving
- 3) Food Preparation and Serving
- 4) Installation, Maintenance and Repair
- 5) Office and Administrative Support

Workforce Summary – Pender County - North Carolina

Population (2019)	63,527
Population Growth 2014-2019	7,619
Projected Population Growth 2019-2024	5,401
Total Employment (2019)	15,405
Job Growth 2014-2019	2,388
Projected Job Growth 2019-2024	1,710
Average Earners Per Job	\$42,852
Labor Force (2019)	29,345
Cost of Living	91.0
% of Workforce with a High School Diploma	86.6%
% of Workforce with a Bachelors Degree of Higher	25.2%

Largest Industries

- 1) Government
- 2) Retail Trade
- 3) Accommodation and Food Services
- 4) Construction
- 5) Health Care and Social assistance

Top Growth Industries

- 1) Retail Trade
- 2) Accommodation and Food Services
- 3) Wholesale Trade
- 4) Construction
- 5) Other Services

Largest Occupations

- 1) Food Preparation and Serving
- 2) Sales and Related
- 3) Office and Administrative Support
- 4) Construction and Extraction
- 5) Transportation and Material Moving

Top Growth Occupations

- 1) Sales and Related
- 2) Food Preparation and Serving
- 3) Transportation and Material Moving
- 4) Construction and Extraction
- 5) Office and Administrative Support

Workforce Summary – Robeson County, North Carolina

Population (2019)	131,467
Population Growth 2014-2019	(-3,471)
Projected Population Growth 2019-2024	(-1,636)
Total Employment (2019)	44,370
Job Growth 2014-2019	715
Projected Job Growth 2019-2024	692
Average Earners Per Job	\$42,554
Labor Force (2019)	50,730
Cost of Living	87.8
% of Workforce with a High School Diploma	75.8%
% of Workforce with a Bachelors Degree of Higher	13.0%

Largest Industries

- 1) Government
- 2) Health Care and Social Assistance
- 3) Manufacturing
- 4) Retail Trade
- 5) Accommodation and Food Services

Top Growth Industries

- 1) Manufacturing
- 2) Support and Waste Management
- 3) Accommodation and Food Services
- 4) Professional, Scientific & Technical Services
- 5) Other Services

Largest Occupations

- 1) Production
- 2) Office and Administrative Support
- 3) Sales and Related
- 4) Transportation and Material Moving
- 5) Food Preparation and Serving

Top Growth Occupations

- 1) Production
- 2) Transportation and Material Moving
- 3) Food Preparation and Serving
- 4) Building and Grounds Cleaning and Maintenance
- 5) Educational Instruction and Library

Workforce Summary – Sampson County, North Carolina

Population (2019)	63,599
Population Growth 2014-2019	(-219)
Projected Population Growth 2019-2024	249
Total Employment (2019)	22,206
Job Growth 2014-2019	(-188)
Projected Job Growth 2019-2024	280
Average Earners Per Job	\$44,955
Labor Force (2019)	30,058
Cost of Living	93.8
% of Workforce with a High School Diploma	67.6%
% of Workforce with a Bachelors Degree of Higher	13.2%

Largest Industries

- 1) Government
- 2) Agriculture, Forestry, Fishing, Hunting
- 3) Manufacturing
- 4) Retail Trade
- 5) Health Care and Social Assistance

Top Growth Industries

- 1) Construction
- 2) Retail Trade
- 3) Educational Services
- 4) Transportation and Warehousing
- 5) Manufacturing

Largest Occupations

- 1) Production
- 2) Farming, Fishing and Forestry
- 3) Office and Administrative Support
- 4) Transportation and Material Moving
- 5) Management

Top Growth Occupations

- 1) Construction and Extraction
- 2) Transportation and Material Moving
- 3) Installation, Maintenance & Repair
- 4) Protective Service
- 5) Sales and Related

Workforce Summary – Scotland County, North Carolina

Population (2019)	34,661
Population Growth 2014-2019	(-1,003)
Projected Population Growth 2019-2024	(-747)
Total Employment (2019)	13,310
Job Growth 2014-2019	290
Projected Job Growth 2019-2024	186
Average Earners Per Job	\$45,032
Labor Force (2019)	11,607
Cost of Living	89.5
% of Workforce with a High School Diploma	78.4%
% of Workforce with a Bachelors Degree of Higher	16.0%

Largest Industries

- 1) Government
- 2) Manufacturing
- 3) Health Care and Social Assistance
- 4) Retail Trade
- 5) Accommodation and Food Services

Top Growth Industries

- 1) Manufacturing
- 2) Health Care and Social Assistance
- 3) Accommodation and Food Services
- 4) Retail Trade
- 5) Construction

Largest Occupations

- 1) Production
- 2) Office and Administrative Support
- 3) Sales and Related
- 4) Transportation and Material Moving
- 5) Food Preparation and Serving

Top Growth Occupations

- 1) Healthcare Support
- 2) Production
- 3) Transportation and Material Moving
- 4) Management
- 5) Educational Instruction and Library

Workforce Summary – Wayne County, North Carolina

Population (2019)	122,999
Population Growth 2014-2019	(-1,634)
Projected Population Growth 2019-2024	(-964)
Total Employment (2019)	51,212
Job Growth 2014-2019	(-710)
Projected Job Growth 2019-2024	246
Average Earners Per Job	\$47,440
Labor Force (2019)	52,215
Cost of Living	93.7
% of Workforce with a High School Diploma	82.1%
% of Workforce with a Bachelors Degree of Higher	18.4%

Largest Industries

- 1) Government
- 2) Health Care and Social assistance
- 3) Retail Trade
- 4) Manufacturing
- 5) Accommodation and Food Services

Top Growth Industries

- 1) Accommodation and Food Services
- 2) Transportation and Warehousing
- 3) Construction
- 4) Retail Trade
- 5) Support and Waste Management

Largest Occupations

- 1) Sales and Related
- 2) Office and Administrative Support
- 3) Food Preparation and Serving
- 4) Transportation and Material Moving
- 5) Production

Top Growth Occupations

- 1) Food Preparation and Serving
- 2) Construction and Extraction
- 3) Building and Grounds Cleaning and Maintenance
- 4) Business and Financial Operations
- 5) Transportation and Material Moving

Appendix 2: Regional Education and Training Programs

4-Year Colleges and Universities

Fayetteville State University	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	246	0	0	141	105	0
HEALTH PROFESSIONS AND RELATED PROGRAMS	210	0	0	210	0	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	172	0	0	163	9	0
PSYCHOLOGY	161	0	0	149	12	0
PUBLIC ADMINISTRATION AND SOCIAL SERVICE PROFESSIONS	104	0	0	65	39	0
SOCIAL SCIENCES	71	0	0	64	7	0
BIOLOGICAL AND BIOMEDICAL SCIENCES	61	0	0	61	0	0
EDUCATION	57	0	0	29	19	9
LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES	49	0	0	49	0	0
COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES	20	0	0	20	0	0
COMMUNICATION, JOURNALISM, AND RELATED PROGRAMS	19	0	0	19	0	0
VISUAL AND PERFORMING ARTS	17	0	0	17	0	0
ENGLISH LANGUAGE AND LITERATURE/LETTERS	11	0	0	11	0	0
MATHEMATICS AND STATISTICS	8	0	0	8	0	0
HISTORY	5	0	0	5	0	0
PHYSICAL SCIENCES	4	0	0	4	0	0
FOREIGN LANGUAGES, LITERATURES, AND LINGUISTICS	2	0	0	2	0	0
MILITARY TECHNOLOGIES AND APPLIED SCIENCES	1	1	0	0	0	0
TOTAL	1,218	1	0	1,017	191	9

Methodist University	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	151	2	0	135	14	0
HEALTH PROFESSIONS AND RELATED PROGRAMS	139	0	0	58	38	43
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	64	0	0	45	19	0
PARKS, RECREATION, LEISURE, AND FITNESS STUDIES	33	0	0	33	0	0
BIOLOGICAL AND BIOMEDICAL SCIENCES	23	0	0	23	0	0
EDUCATION	16	2	0	7	7	0
PUBLIC ADMINISTRATION AND SOCIAL SERVICE PROFESSIONS	14	0	0	14	0	0
COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES	13	0	0	13	0	0
PSYCHOLOGY	12	0	0	12	0	0
ENGINEERING TECHNOLOGIES AND ENGINEERING-RELATED FIELDS	10	0	0	10	0	0
SOCIAL SCIENCES	10	0	0	10	0	0
COMMUNICATION, JOURNALISM, AND RELATED PROGRAMS	8	0	0	8	0	0
VISUAL AND PERFORMING ARTS	8	0	0	8	0	0
HISTORY	2	0	0	2	0	0
MATHEMATICS AND STATISTICS	2	0	0	2	0	0
PHYSICAL SCIENCES	2	0	0	2	0	0
ENGLISH LANGUAGE AND LITERATURE/LETTERS	1	0	1	0	0	0
FOREIGN LANGUAGES, LITERATURES, AND LINGUISTICS	1	0	0	1	0	0
LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES	1	0	1	0	0	0
TOTAL	510	4	2	383	78	43

St. Andrews University	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	42	0	0	30	12	0
EDUCATION	22	0	0	22	0	0
BIOLOGICAL AND BIOMEDICAL SCIENCES	10	0	0	10	0	0
PSYCHOLOGY	8	0	0	8	0	0
PARKS, RECREATION, LEISURE, AND FITNESS STUDIES	7	0	0	7	0	0
COMMUNICATION, JOURNALISM, AND RELATED PROGRAMS	6	0	0	6	0	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	3	0	0	3	0	0
ENGLISH LANGUAGE AND LITERATURE/LETTERS	2	0	0	2	0	0
HISTORY	2	0	0	2	0	0
AGRICULTURE, AGRICULTURE OPERATIONS, AND RELATED SCIENCES	1	0	0	1	0	0
MULTI/INTERDISCIPLINARY STUDIES	1	0	0	1	0	0
PHILOSOPHY AND RELIGIOUS STUDIES	1	0	0	1	0	0
TOTAL	105	0	0	93	12	0

University of Mount Olive PROGRAMS	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	272	0	0	181	91	0
HEALTH PROFESSIONS AND RELATED PROGRAMS	168	0	54	109	5	0
LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES	115	0	115	0	0	0
EDUCATION	111	0	0	90	21	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	64	0	0	64	0	0
AGRICULTURE, AGRICULTURE OPERATIONS, AND RELATED SCIENCES	44	0	4	40	0	0
PARKS, RECREATION, LEISURE, AND FITNESS STUDIES	36	0	0	36	0	0
BIOLOGICAL AND BIOMEDICAL SCIENCES	18	0	0	18	0	0
PSYCHOLOGY	16	0	0	16	0	0
ENGLISH LANGUAGE AND LITERATURE/LETTERS	10	6	0	4	0	0
VISUAL AND PERFORMING ARTS	10	0	0	10	0	0
COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES	6	0	0	6	0	0
PHILOSOPHY AND RELIGIOUS STUDIES	5	0	0	5	0	0
HISTORY	4	0	0	4	0	0
MATHEMATICS AND STATISTICS	2	0	0	2	0	0
PHYSICAL SCIENCES	2	0	0	2	0	0
THEOLOGY AND RELIGIOUS VOCATIONS	2	0	0	2	0	0
COMMUNICATION, JOURNALISM, AND RELATED PROGRAMS	1	0	0	1	0	0
TOTAL	886	6	173	590	117	0

University of North Carolina at Pembroke	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	170	0	0	122	48	0
EDUCATION	167	0	0	64	103	0
BIOLOGICAL AND BIOMEDICAL SCIENCES	128	0	0	128	0	0
PUBLIC ADMINISTRATION AND SOCIAL SERVICE PROFESSIONS	120	0	0	47	73	0
SOCIAL SCIENCES	120	0	0	120	0	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	113	0	0	113	0	0
PARKS, RECREATION, LEISURE, AND FITNESS STUDIES	98	0	0	98	0	0
HEALTH PROFESSIONS AND RELATED PROGRAMS	65	0	0	50	15	0
COMMUNICATION, JOURNALISM, AND RELATED PROGRAMS	44	0	0	44	0	0
PSYCHOLOGY	41	0	0	41	0	0
PHYSICAL SCIENCES	30	0	0	30	0	0
COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES	29	0	0	29	0	0
VISUAL AND PERFORMING ARTS	28	0	0	28	0	0
MULTI/INTERDISCIPLINARY STUDIES	23	0	0	23	0	0
HISTORY	15	0	0	15	0	0
NATURAL RESOURCES AND CONSERVATION	12	0	0	12	0	0
ENGLISH LANGUAGE AND LITERATURE/LETTERS	6	0	0	6	0	0
FOREIGN LANGUAGES, LITERATURES, AND LINGUISTICS	6	0	0	6	0	0
AREA, ETHNIC, CULTURAL, GENDER, AND GROUP STUDIES	5	0	0	5	0	0
MATHEMATICS AND STATISTICS	5	0	0	5	0	0
PHILOSOPHY AND RELIGIOUS STUDIES	4	0	0	4	0	0
TOTAL	1,229	0	0	990	239	0

University of North Carolina Wilmington	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
HEALTH PROFESSIONS AND RELATED PROGRAMS	1,148	7	0	990	142	9
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	877	0	0	753	124	0
EDUCATION	366	0	0	183	166	17
BIOLOGICAL AND BIOMEDICAL SCIENCES	265	0	0	255	8	2
SOCIAL SCIENCES	261	5	0	248	8	0
PSYCHOLOGY	258	0	0	239	19	0
COMMUNICATION, JOURNALISM, AND RELATED PROGRAMS	202	0	0	202	0	0
PUBLIC ADMINISTRATION AND SOCIAL SERVICE PROFESSIONS	168	2	0	79	87	0
PARKS, RECREATION, LEISURE, AND FITNESS STUDIES	162	0	0	162	0	0
VISUAL AND PERFORMING ARTS	159	0	0	159	0	0
ENGLISH LANGUAGE AND LITERATURE/LETTERS	143	0	0	119	24	0
NATURAL RESOURCES AND CONSERVATION	138	0	0	118	20	0
PHYSICAL SCIENCES	138	0	0	94	44	0
COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES	137	0	0	112	25	0
MULTI/INTERDISCIPLINARY STUDIES	91	0	0	66	25	0
MATHEMATICS AND STATISTICS	67	0	0	55	12	0
HISTORY	63	0	0	44	19	0
FOREIGN LANGUAGES, LITERATURES, AND LINGUISTICS	56	0	0	51	5	0
PHILOSOPHY AND RELIGIOUS STUDIES	25	0	0	25	0	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	14	14	0	0	0	0
LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES	7	0	0	0	7	0
TOTAL	4,745	28	0	3,954	735	28

Carolina College of Biblical Studies	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
THEOLOGY AND RELIGIOUS VOCATIONS	46	0	27	19	0	0
TOTAL	46	0	27	19	0	0

Grace College of Divinity	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
THEOLOGY AND RELIGIOUS VOCATIONS	14	6	3	5	0	0
PHILOSOPHY AND RELIGIOUS STUDIES	12	4	6	1	1	0
TOTAL	26	10	9	6	1	0

Miller-Motte Wilmington	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
HEALTH PROFESSIONS AND RELATED PROGRAMS	272	147	94	31	0	0
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	74	0	57	17	0	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	51	0	39	12	0	0
PERSONAL AND CULINARY SERVICES	27	27	0	0	0	0
COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES	13	0	13	0	0	0
LEGAL PROFESSIONS AND STUDIES	7	0	7	0	0	0
TOTAL	444	174	210	60	0	0

Public Community Colleges

Bladen Community College	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES	126	0	126	0	0	0
HEALTH PROFESSIONS AND RELATED PROGRAMS	108	47	61	0	0	0
PRECISION PRODUCTION	62	54	8	0	0	0
COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES	44	36	8	0	0	0
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	35	31	4	0	0	0
EDUCATION	28	22	6	0	0	0
CONSTRUCTION TRADES	22	20	2	0	0	0
PERSONAL AND CULINARY SERVICES	16	12	4	0	0	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	15	10	5	0	0	0
FAMILY AND CONSUMER SCIENCES/HUMAN SCIENCES	6	6	0	0	0	0
ENGINEERING TECHNOLOGIES AND ENGINEERING-RELATED FIELDS	4	4	0	0	0	0
TOTAL	466	242	224	0	0	0

Brunswick Community College	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES	175	0	175	0	0	0
HEALTH PROFESSIONS AND RELATED PROGRAMS	76	37	39	0	0	0
AGRICULTURE, AGRICULTURE OPERATIONS, AND RELATED SCIENCES	44	28	16	0	0	0
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	24	20	4	0	0	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	23	23	0	0	0	0
PRECISION PRODUCTION	15	15	0	0	0	0
PERSONAL AND CULINARY SERVICES	13	11	2	0	0	0
PARKS, RECREATION, LEISURE, AND FITNESS STUDIES	11	9	2	0	0	0
EDUCATION	10	8	2	0	0	0
BIOLOGICAL AND BIOMEDICAL SCIENCES	8	3	5	0	0	0
COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES	8	3	5	0	0	0
ENGINEERING TECHNOLOGIES AND ENGINEERING-RELATED FIELDS	7	5	2	0	0	0
ENGINEERING	4	0	4	0	0	0
FAMILY AND CONSUMER SCIENCES/HUMAN SCIENCES	4	4	0	0	0	0
TOTAL	422	166	256	0	0	0

Cape Fear Community College PROGRAMS	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES	839	0	839	0	0	0
HEALTH PROFESSIONS AND RELATED PROGRAMS	251	74	177	0	0	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	100	73	27	0	0	0
PERSONAL AND CULINARY SERVICES	94	76	18	0	0	0
COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES	92	58	34	0	0	0
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	76	32	44	0	0	0
ENGINEERING TECHNOLOGIES AND ENGINEERING-RELATED FIELDS	71	39	32	0	0	0
PRECISION PRODUCTION	65	54	11	0	0	0
MECHANIC AND REPAIR TECHNOLOGIES/TECHNICIANS	64	46	18	0	0	0
TRANSPORTATION AND MATERIALS MOVING	64	64	0	0	0	0
CONSTRUCTION TRADES	48	20	28	0	0	0
VISUAL AND PERFORMING ARTS	35	5	30	0	0	0
NATURAL RESOURCES AND CONSERVATION	28	0	28	0	0	0
LEGAL PROFESSIONS AND STUDIES	22	16	6	0	0	0
AGRICULTURE, AGRICULTURE OPERATIONS, AND RELATED SCIENCES	14	14	0	0	0	0
FOREIGN LANGUAGES, LITERATURES, AND LINGUISTICS	13	0	13	0	0	0
SCIENCE TECHNOLOGIES/TECHNICIANS	8	0	8	0	0	0
EDUCATION	6	0	6	0	0	0
ENGINEERING	4	0	4	0	0	0
TOTAL	1,894	571	1,323	0	0	0

Coastal Carolina Community College	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES	479	0	479	0	0	0
MECHANIC AND REPAIR TECHNOLOGIES/TECHNICIANS	228	219	9	0	0	0
HEALTH PROFESSIONS AND RELATED PROGRAMS	213	127	86	0	0	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	116	87	29	0	0	0
PERSONAL AND CULINARY SERVICES	87	84	3	0	0	0
COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES	75	48	27	0	0	0
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	73	51	22	0	0	0
ENGINEERING TECHNOLOGIES AND ENGINEERING-RELATED FIELDS	63	49	14	0	0	0
LEGAL PROFESSIONS AND STUDIES	54	47	7	0	0	0
CONSTRUCTION TRADES	41	41	0	0	0	0
PRECISION PRODUCTION	31	31	0	0	0	0
EDUCATION	25	18	7	0	0	0
PARKS, RECREATION, LEISURE, AND FITNESS STUDIES	25	15	10	0	0	0
ENGINEERING	6	0	6	0	0	0
FAMILY AND CONSUMER SCIENCES/HUMAN SCIENCES	2	2	0	0	0	0
TOTAL	1,518	819	699	0	0	0

Craven Community College	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES	412	0	412	0	0	0
HEALTH PROFESSIONS AND RELATED PROGRAMS	130	35	95	0	0	0
MECHANIC AND REPAIR TECHNOLOGIES/TECHNICIANS	61	44	17	0	0	0
COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES	49	27	22	0	0	0
PRECISION PRODUCTION	43	21	22	0	0	0
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	39	21	18	0	0	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	38	33	5	0	0	0
ENGINEERING TECHNOLOGIES AND ENGINEERING-RELATED FIELDS	29	18	11	0	0	0
PERSONAL AND CULINARY SERVICES	23	23	0	0	0	0
EDUCATION	18	12	6	0	0	0
ENGINEERING	7	0	7	0	0	0
TOTAL	849	234	615	0	0	0

Fayetteville Technical Community College	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES	928	0	928	0	0	0
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	798	617	181	0	0	0
COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES	525	431	94	0	0	0
HEALTH PROFESSIONS AND RELATED PROGRAMS	477	242	235	0	0	0
EDUCATION	382	295	87	0	0	0
MECHANIC AND REPAIR TECHNOLOGIES/TECHNICIANS	378	302	76	0	0	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	312	218	94	0	0	0
PERSONAL AND CULINARY SERVICES	228	157	71	0	0	0
VISUAL AND PERFORMING ARTS	136	107	29	0	0	0
CONSTRUCTION TRADES	93	62	31	0	0	0
FAMILY AND CONSUMER SCIENCES/HUMAN SCIENCES	78	78	0	0	0	0
ENGINEERING TECHNOLOGIES AND ENGINEERING-RELATED FIELDS	74	37	37	0	0	0
PRECISION PRODUCTION	55	51	4	0	0	0
PARKS, RECREATION, LEISURE, AND FITNESS STUDIES	26	22	4	0	0	0
AGRICULTURE, AGRICULTURE OPERATIONS, AND RELATED SCIENCES	24	15	9	0	0	0
LEGAL PROFESSIONS AND STUDIES	18	5	13	0	0	0
MILITARY TECHNOLOGIES AND APPLIED SCIENCES	6	3	3	0	0	0
PUBLIC ADMINISTRATION AND SOCIAL SERVICE PROFESSIONS	1	1	0	0	0	0
TOTAL	4,539	2,643	1,896	0	0	0

James Sprunt Community College	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES	100	13	87	0	0	0
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	72	54	18	0	0	0
COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES	46	30	16	0	0	0
EDUCATION	25	8	17	0	0	0
MECHANIC AND REPAIR TECHNOLOGIES/TECHNICIANS	21	17	4	0	0	0
HEALTH PROFESSIONS AND RELATED PROGRAMS	20	6	14	0	0	0
PRECISION PRODUCTION	16	16	0	0	0	0
CONSTRUCTION TRADES	12	12	0	0	0	0
PERSONAL AND CULINARY SERVICES	11	3	8	0	0	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	10	9	1	0	0	0
VISUAL AND PERFORMING ARTS	7	1	6	0	0	0
AGRICULTURE, AGRICULTURE OPERATIONS, AND RELATED SCIENCES	5	1	4	0	0	0
FAMILY AND CONSUMER SCIENCES/HUMAN SCIENCES	3	3	0	0	0	0
TOTAL	348	173	175	0	0	0

Lenoir Community College	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES	254	1	253	0	0	0
HEALTH PROFESSIONS AND RELATED PROGRAMS	215	96	119	0	0	0
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	119	97	22	0	0	0
PRECISION PRODUCTION	83	71	12	0	0	0
EDUCATION	77	70	7	0	0	0
MECHANIC AND REPAIR TECHNOLOGIES/TECHNICIANS	76	65	11	0	0	0
ENGINEERING TECHNOLOGIES AND ENGINEERING-RELATED FIELDS	68	63	5	0	0	0
PERSONAL AND CULINARY SERVICES	62	56	6	0	0	0
VISUAL AND PERFORMING ARTS	48	37	11	0	0	0
AGRICULTURE, AGRICULTURE OPERATIONS, AND RELATED SCIENCES	45	34	11	0	0	0
TRANSPORTATION AND MATERIALS MOVING	40	33	7	0	0	0
COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES	24	19	5	0	0	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	21	14	7	0	0	0
FAMILY AND CONSUMER SCIENCES/HUMAN SCIENCES	11	11	0	0	0	0
TOTAL	1,143	667	476	0	0	0

Montgomery Community College	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
MECHANIC AND REPAIR TECHNOLOGIES/TECHNICIANS	118	98	20	0	0	0
HEALTH PROFESSIONS AND RELATED PROGRAMS	86	65	21	0	0	0
NATURAL RESOURCES AND CONSERVATION	30	14	16	0	0	0
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	29	16	13	0	0	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	28	26	2	0	0	0
LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES	22	0	22	0	0	0
EDUCATION	20	17	3	0	0	0
CONSTRUCTION TRADES	18	11	7	0	0	0
AGRICULTURE, AGRICULTURE OPERATIONS, AND RELATED SCIENCES	8	8	0	0	0	0
ENGINEERING TECHNOLOGIES AND ENGINEERING-RELATED FIELDS	8	5	3	0	0	0
COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES	5	4	1	0	0	0
VISUAL AND PERFORMING ARTS	3	3	0	0	0	0
PRECISION PRODUCTION	1	1	0	0	0	0
TOTAL	376	268	108	0	0	0

Robeson Community College	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
HEALTH PROFESSIONS AND RELATED PROGRAMS	111	45	66	0	0	0
LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES	90	0	90	0	0	0
CONSTRUCTION TRADES	75	60	15	0	0	0
ENGINEERING TECHNOLOGIES AND ENGINEERING-RELATED FIELDS	64	52	12	0	0	0
EDUCATION	51	39	12	0	0	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	50	42	8	0	0	0
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	37	3	34	0	0	0
PRECISION PRODUCTION	34	34	0	0	0	0
MECHANIC AND REPAIR TECHNOLOGIES/TECHNICIANS	26	26	0	0	0	0
PERSONAL AND CULINARY SERVICES	16	10	6	0	0	0
COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES	15	6	9	0	0	0
FAMILY AND CONSUMER SCIENCES/HUMAN SCIENCES	13	13	0	0	0	0
TOTAL	582	330	252	0	0	0

Sampson Community College	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES	112	0	112	0	0	0
HEALTH PROFESSIONS AND RELATED PROGRAMS	90	27	63	0	0	0
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	55	28	27	0	0	0
EDUCATION	42	29	13	0	0	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	39	22	17	0	0	0
FOREIGN LANGUAGES, LITERATURES, AND LINGUISTICS	32	26	6	0	0	0
COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES	13	0	13	0	0	0
CONSTRUCTION TRADES	13	6	7	0	0	0
ENGINEERING TECHNOLOGIES AND ENGINEERING-RELATED FIELDS	10	7	3	0	0	0
PRECISION PRODUCTION	9	5	4	0	0	0
AGRICULTURE, AGRICULTURE OPERATIONS, AND RELATED SCIENCES	6	1	5	0	0	0
PERSONAL AND CULINARY SERVICES	5	2	3	0	0	0
TOTAL	426	153	273	0	0	0

Sandhills Community College	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES	345	0	345	0	0	0
HEALTH PROFESSIONS AND RELATED PROGRAMS	181	40	141	0	0	0
ENGINEERING TECHNOLOGIES AND ENGINEERING-RELATED FIELDS	68	35	33	0	0	0
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	46	21	25	0	0	0
PERSONAL AND CULINARY SERVICES	43	26	17	0	0	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	32	25	7	0	0	0
COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES	30	14	16	0	0	0
EDUCATION	27	12	15	0	0	0
PARKS, RECREATION, LEISURE, AND FITNESS STUDIES	24	5	19	0	0	0
MECHANIC AND REPAIR TECHNOLOGIES/TECHNICIANS	19	10	9	0	0	0
AGRICULTURE, AGRICULTURE OPERATIONS, AND RELATED SCIENCES	12	6	6	0	0	0
VISUAL AND PERFORMING ARTS	7	6	1	0	0	0
TOTAL	834	200	634	0	0	0

Southeastern Community College	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES	128	0	128	0	0	0
HEALTH PROFESSIONS AND RELATED PROGRAMS	81	35	46	0	0	0
ENGINEERING TECHNOLOGIES AND ENGINEERING-RELATED FIELDS	79	55	24	0	0	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	29	24	5	0	0	0
PRECISION PRODUCTION	16	10	6	0	0	0
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	13	6	7	0	0	0
PERSONAL AND CULINARY SERVICES	11	7	4	0	0	0
EDUCATION	11	0	11	0	0	0
MECHANIC AND REPAIR TECHNOLOGIES/TECHNICIANS	10	5	5	0	0	0
COMMUNICATIONS TECHNOLOGIES/TECHNICIANS AND SUPPORT SERVICES	9	4	5	0	0	0
COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES	7	3	4	0	0	0
NATURAL RESOURCES AND CONSERVATION	1	0	1	0	0	0
TOTAL	395	149	249	0	0	0

South Piedmont Community College	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES	161	0	161	0	0	0
HEALTH PROFESSIONS AND RELATED PROGRAMS	138	70	68	0	0	0
COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES	53	45	8	0	0	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	48	45	3	0	0	0
EDUCATION	39	33	6	0	0	0
ENGINEERING TECHNOLOGIES AND ENGINEERING-RELATED FIELDS	23	13	10	0	0	0
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	21	7	14	0	0	0
VISUAL AND PERFORMING ARTS	16	11	5	0	0	0
AGRICULTURE, AGRICULTURE OPERATIONS, AND RELATED SCIENCES	12	10	2	0	0	0
FAMILY AND CONSUMER SCIENCES/HUMAN SCIENCES	9	9	0	0	0	0
MECHANIC AND REPAIR TECHNOLOGIES/TECHNICIANS	7	5	2	0	0	0
PRECISION PRODUCTION	5	5	0	0	0	0
LEGAL PROFESSIONS AND STUDIES	3	0	3	0	0	0
CONSTRUCTION TRADES	2	1	1	0	0	0
PERSONAL AND CULINARY SERVICES	1	1	0	0	0	0
TOTAL	538	255	283	0	0	0

Wayne Community College PROGRAMS	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
HEALTH PROFESSIONS AND RELATED PROGRAMS	310	187	123	0	0	0
COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES	305	279	26	0	0	0
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	300	236	64	0	0	0
LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES	267	0	267	0	0	0
VISUAL AND PERFORMING ARTS	196	176	20	0	0	0
PRECISION PRODUCTION	188	177	11	0	0	0
MECHANIC AND REPAIR TECHNOLOGIES/TECHNICIANS	172	140	32	0	0	0
ENGINEERING TECHNOLOGIES AND ENGINEERING-RELATED FIELDS	115	88	27	0	0	0
AGRICULTURE, AGRICULTURE OPERATIONS, AND RELATED SCIENCES	75	48	27	0	0	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	72	55	17	0	0	0
EDUCATION	42	34	8	0	0	0
NATURAL RESOURCES AND CONSERVATION	33	20	13	0	0	0
FAMILY AND CONSUMER SCIENCES/HUMAN SCIENCES	14	14	0	0	0	0
ENGINEERING	2	0	2	0	0	0
TOTAL	2,091	1,454	637	0	0	0

Other Private Institutions

Miller-Motte Fayetteville	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
HEALTH PROFESSIONS AND RELATED PROGRAMS	163	93	70	0	0	0
TRANSPORTATION AND MATERIALS MOVING	142	142	0	0	0	0
PERSONAL AND CULINARY SERVICES	82	82	0	0	0	0
HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES	6	0	6	0	0	0
LEGAL PROFESSIONS AND STUDIES	3	0	3	0	0	0
TOTAL	396	317	79	0	0	0

Miller-Motte Jacksonville	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
TRANSPORTATION AND MATERIALS MOVING	259	259	0	0	0	0
HEALTH PROFESSIONS AND RELATED PROGRAMS	76	44	32	0	0	0
PERSONAL AND CULINARY SERVICES	22	22	0	0	0	0
BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES	7	0	7	0	0	0
TOTAL	364	325	39	0	0	0

Anson College of Cosmetology	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
PERSONAL AND CULINARY SERVICES	2	2	0	0	0	0
TOTAL	2	2	0	0	0	0

College of Wilmington	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
HEALTH PROFESSIONS AND RELATED PROGRAMS	33	33	0	0	0	0
PERSONAL AND CULINARY SERVICES	30	30	0	0	0	0
TOTAL	63	63	0	0	0	0

Paul Mitchell the School Fayetteville	TOTAL degrees and certificates 2019	All certificates 2019	AA Degree 2019	BA Degree 2019	Master's Degree 2019	Doctor's Degree 2019
PROGRAMS						
PERSONAL AND CULINARY SERVICES	76	76	0	0	0	0
TOTAL	76	76	0	0	0	0

Top Career and Technical Education Credits By School District

Anson County Schools 877 Total	earned credentials	percent of total	
Conover Credential Workplace Readiness	161	18.36%	
Microsoft Office Specialist 2016 PowerPoint	71	8.10%	
Microsoft Office Specialist 2016 Word	71	8.10%	
Module 00101 (with Performance Profile)	50	5.70%	Basic Safety
Module 00102	50	5.70%	Introduction to Construction Math
Module 00103 (with Performance Profile)	50	5.70%	Introduction to Hand Tools
Module 00104 (with Performance Profile)	50	5.70%	Introduction to Power Tools
Module 00105 (with Performance Profile)	50	5.70%	Introduction to Construction Drawings
Module 00107 (with Performance Profile)	50	5.70%	Basic Communication
Module 00108 (with Performance Profile)	50	5.70%	Basic Employability Skills
Module 00109 (with Performance Profile)	50	5.70%	Introduction to Material Handling
Module 70101	50	5.70%	Your Role in the Green Environment
OSHA 10-Hour Construction Industry Certification	50	5.70%	

Bladen County Schools 2,535 Total	earned credentials	percent of total	
First Principles Food Handler Certificate	159	6.27%	
NC Hunter Safety Course	145	5.72%	
CPR/AED	102	4.01%	
OSHA 10-Hour Industry Certification (Healthcare)	99	3.91%	
Microsoft Office Specialist 2016 Word 97	97	3.83%	
Microsoft Office Specialist 2016 PowerPoint	75	2.96%	
NIMS (DHS/FEMA) IS-200	63	2.49%	ICS for Single Sources & Initial Action Incidents
EverFi	61	2.41%	Financial Literacy for High School
NIMS (DHS/FEMA) IS-100	61	2.41%	Introduction to Incident Command System
Module 00107 (with Performance Profile)	57	2.25%	Basic Communication

Brunswick County Schools 2,589 Total	earned credentials	percent of total	
EverFi	227	8.77%	Financial Literacy for High School
Microsoft Office Specialist 2016 Word	161	6.22%	
Microsoft Office Specialist 2016 PowerPoint	158	6.10%	
Module 00107 (with Performance Profile)	127	4.91%	Basic Communication
CPR/AED	118	4.56%	
Module 00104 (with Performance Profile)	117	4.52%	Introduction to Power Tools
Module 00103 (with Performance Profile)	96	3.71%	Introduction to Hand Tools
Module 00108 (with Performance Profile)	94	3.63%	Basic Employability Skills
Module 00101 (with Performance Profile)	93	3.59%	Basic Safety
Module 00102	93	3.59%	Introduction to Construction Math

Columbus County Schools 2,070 Total	earned credentials	percent of total	
Microsoft Office Specialist 2016 Word	148	7.15%	
Microsoft Office Specialist 2016 PowerPoint	137	6.62%	
Module 00101 (with Performance Profile)	83	4.01%	Basic Safety
Module 00102	83	4.01%	Introduction to Construction Math
Module 00103 (with Performance Profile)	83	4.01%	Introduction to Hand Tools
Module 00104 (with Performance Profile)	83	4.01%	Introduction to Power Tools
Module 00105 (with Performance Profile)	83	4.01%	Introduction to Construction Drawings
Module 00107 (with Performance Profile)	83	4.01%	Basic Communication
Module 00108 (with Performance Profile)	83	4.01%	Basic Employability Skills
Module 00109 (with Performance Profile)	83	4.01%	Introduction to Material Handling
Module 70101	83	4.01%	Your Role in the Green Environment
OSHA 10-Hour Construction Industry Certification	83	4.01%	

Whiteville City Schools 443 Total	earned credentials	percent of total	
S/P2 - Mechanical Safety	40	9.03%	
S/P2 - Mechanical Pollution Prevention	37	8.35%	
Microsoft Office Specialist 2016 Word	34	7.67%	
Microsoft Office Specialist 2016 PowerPoint	32	7.22%	
CPR/AED	29	6.55%	
Module 00105 (with Performance Profile)	24	5.42%	
Module 70101	25	5.42%	Your Role in the Green Environment
Module 00103 (with Performance Profile)	23	5.19%	Introduction to Hand Tools
Module 00104 (with Performance Profile)	22	4.97%	Introduction to Power Tools
Module 00101 (with Performance Profile)	21	4.74%	Basic Safety
Module 00102	21	4.74%	Introduction to Construction Math
Module 00107 (with Performance Profile)	21	4.74%	Basic Communication
Module 00109 (with Performance Profile)	21	4.74%	Introduction to Material Handling

Craven County Schools 2,109 Total	earned credentials	percent of total	
Microsoft Office Specialist 2016 Word	210	9.96%	
Microsoft Office Specialist 2016 PowerPoint	186	8.82%	
OSHA 10-Hour Construction Industry Certification	126	5.97%	
NIMS (DHS/FEMA) IS-100	111	5.26%	Introduction to Incident Command System
Adobe Photoshop	104	4.93%	
Microburst Learning Employers; Choice Certificate	99	4.69%	
First Principles Food Handler Certificate	72	3.41%	
NIMS (DHS/FEMA) IS-200	72	3.41%	ICS for Single Sources & Initial Action Incidents
Adobe Illustrator	71	3.37%	
CPR/AED	70	3.32%	

NORTH CAROLINA'S SOUTHEAST COMPETITIVE POSITIONING 2020

Cumberland County Schools 5,817 Total	earned credentials	percent of total	
Microsoft Office Specialist 2016 Word	722	12.41%	
Microsoft Office Specialist 2016 PowerPoint	702	12.07%	
Conover Credential Workplace Readiness	577	9.92%	
NIMS (DHS/FEMA) IS-200	431	7.41%	ICS for Single Sources & Initial Action Incidents
NIMS (DHS/FEMA) IS-100	398	6.84%	Introduction to Incident Command System
EverFi	373	6.41%	Financial Literacy for High School
NIMS (DHS/FEMA) IS-800	361	6.21%	National Response Framework, an Introduction
NIMS (DHS/FEMA) IS-700	356	6.12%	National Incident Management System, an Introduction
Microsoft Office Specialist 2016 Excel Core	269	4.62%	
CPR/AED	153	2.63%	

Duplin County Schools 1,907 Total	earned credentials	percent of total	
Conover Credential Workplace Readiness	301	15.78%	
Microsoft Office Specialist 2016 Word	266	13.95%	
Microsoft Office Specialist 2016 PowerPoint	246	12.90%	
S/P2 - Mechanical Safety	167	8.76%	
S/P2 - Mechanical Pollution Prevention	155	8.13%	
CPR/AED	116	6.08%	
Microsoft Office Specialist 2016 Excel Expert	35	1.84%	
EverFi	31	1.63%	Financial Literacy for High School
Microsoft Office Specialist 2016 Excel Core	30	1.57%	
Module 00109 (with Performance Profile)	24	1.26%	Introduction to Material Handling
Module 00107 (with Performance Profile)	24	1.26%	Basic Communication
Module 00103 (with Performance Profile)	24	1.26%	Introduction to Hand Tools
Venture Entrepreneurial Expedition	24	1.26%	

Hoke County Schools 1,271 Total	earned credentials	percent of total	
Conover Credential Workplace Readiness	338	26.59%	
OSHA 10-Hour Construction Industry Certification	100	7.87%	
Microsoft Office Specialist 2016 Word	63	4.96%	
First Aid	59	4.64%	
S/P2 - Mechanical Safety	45	3.54%	
Module 00107 (with Performance Profile)	40	3.15%	Basic Communication
NC Beef Quality Assurance	40	3.15%	
Module 00104 (with Performance Profile)	39	3.07%	Introduction to Power Tools
Microsoft Office Specialist 2016 PowerPoint	37	2.91%	
Module 00108 (with Performance Profile)	36	2.83%	Basic Employability Skills

Lenoir County Public Schools 951 Total	earned credentials	percent of total	
Microsoft Office Specialist 2016 PowerPoint	115	12.09%	
Conover Credential Workplace Readiness	114	11.99%	
Microsoft Office Specialist 2016 Word	98	10.30%	
EverFi	67	7.02%	Financial Literacy for High School
CPR/AED	41	4.31%	
Module 00103 (with Performance Profile)	33	3.70%	Introduction to Hand Tools
Module 00107 (with Performance Profile)	32	3.36%	Basic Communication
Module 00101 (with Performance Profile)	31	3.26%	Basic Safety
Module 00108 (with Performance Profile)	31	3.26%	Basic Employability Skills
Module 70101	30	3.15%	Your Role in the Green Environment
Module 00109 (with Performance Profile)	30	3.15%	Introduction to Material Handling

Montgomery County Schools 1,202 Total	earned credentials	percent of total	
Microsoft Office Specialist 2016 Word	51	4.24%	
Microsoft Office Specialist 2016 PowerPoint	49	4.08%	
NCOSFM Credential - Firefighter Technology I (3024)	43	3.58%	
CPR/AED	43	3.58%	
NCOSFM Credential - Firefighter Technology I (3006)	42	3.49%	
NCOSFM Credential - Firefighter Technology I (3016)	41	3.41%	
Module 00101 (with Performance Profile)	41	3.41%	Basic Safety
NCOSFM Credential - Firefighter Technology I (3005)	41	3.41%	
NCOSFM Credential - Firefighter Technology I (3012)	41	3.41%	
NCOSFM Credential - Firefighter Technology I (3001)	41	3.41%	

Moore County Schools 3,679 Total	earned credentials	percent of total	
First Principles Food Handler Certificate	327	8.89%	
NC Beef Quality Assurance	214	5.82%	
EverFi	179	4.87%	Financial Literacy for High School
Module 00107 (with Performance Profile)	141	3.83%	Basic Communication
Module 00108 (with Performance Profile)	135	3.67%	Basic Employability Skills
S/P2 - Mechanical Safety	134	3.64%	
Microsoft Office Specialist 2016 Word	132	3.59%	
Microsoft Office Specialist 2016 PowerPoint	132	3.59%	
S/P2 - Mechanical Pollution Prevention	128	3.48%	
Module 00104 (with Performance Profile)	127	3.45%	Introduction to Power Tools

New Hanover County Schools 3,007 Total	earned credentials	percent of total	
Microsoft Office Specialist 2016 Word	404	13.44%	
Microsoft Office Specialist 2016 PowerPoint	355	11.81%	
EverFi	349	11.61%	Financial Literacy for High School
Autodesk Certified User AutoCAD	192	6.39%	
First Aid	136	4.52%	
Microsoft Office Specialist 2016 Excel Core	127	4.22%	
CPR/AED	114	3.79%	
Adobe Photoshop	96	3.19%	
Conover Credential Workplace Readiness	93	3.09%	
CPR	68	2.26%	

Onslow County Schools 7,676 Total	earned credentials	percent of total	
Microsoft Office Specialist 2016 Word	373	4.86%	
Module 00107 (with Performance Profile)	370	4.82%	Basic Communication
Module 00104 (with Performance Profile)	367	4.78%	Introduction to Power Tools
Module 00101 (with Performance Profile)	366	4.77%	Basic Safety
Module 00103 (with Performance Profile)	364	4.74%	Introduction to Hand Tools
Module 00109 (with Performance Profile)	363	4.73%	Introduction to Material Handling
Module 00102	354	4.61%	Introduction to Construction Math
Module 00108 (with Performance Profile)	352	4.59%	Introduction to Material Handling
Module 70101	349	4.55%	Your Role in the Green Environment
Module 00105 (with Performance Profile)	345	4.49%	Introduction to Construction Drawings

Pender County Schools 4,021 Total	earned credentials	percent of total	
Module 00101 (with Performance Profile)	241	5.99%	Basic Safety
Module 00107 (with Performance Profile)	240	5.97%	Basic Communication
Module 00105 (with Performance Profile)	240	5.97%	Introduction to Power Tools
Module 00109 (with Performance Profile)	239	5.94%	Introduction to Material Handling
Module 00108 (with Performance Profile)	239	5.94%	Introduction to Material Handling
Module 00104 (with Performance Profile)	239	5.94%	Introduction to Power Tools
Module 00103 (with Performance Profile)	239	5.94%	Introduction to Hand Tools
Module 00102	235	5.84%	Introduction to Construction Math
Module 70101	234	5.82%	Your Role in the Green Environment
Module 59101	78	1.94%	Introduction to Weatherization

Public Schools of Robeson County 2,541 Total	earned credentials	percent of total	
Conover Credential Workplace Readiness	697	27.43%	
Microsoft Office Specialist 2016 Word	588	23.14%	
Microsoft Office Specialist 2016 PowerPoint	584	22.98%	
CPR/AED	212	8.34%	
First Aid	53	2.09%	
NC Hunter Safety Course	51	2.04%	
EverFi	40	1.57%	Financial Literacy for High School
North Carolina Nurse Aide I	38	1.50%	
S/P2 - Mechanical Pollution Prevention	21	0.83%	
S/P2 - Mechanical Safety	21	0.83%	

Sampson County Schools 477 Total	earned credentials	percent of total	
Microsoft Office Specialist 2016 Word	131	27.46%	
Microsoft Office Specialist 2016 PowerPoint	121	25.37%	
EverFi	62	13.00%	Financial Literacy for High School
S/P2 - Mechanical Pollution Prevention	36	7.55%	
S/P2 - Mechanical Safety	36	7.55%	
Conover Credential Workplace Readiness	30	6.29%	
CPR/AED	16	3.35%	
NC Hunter Safety Course	10	2.10%	
ANSI Approved Certified Food Protection Manager	9	1.89%	
Microsoft Office Specialist 2016 Excel Core	9	1.89%	

Clinton City Schools 262 Total	earned credentials	percent of total	
NIMS (DHS/FEMA) IS-100	47	17.94%	Introduction to Incident Command System
NIMS (DHS/FEMA) IS-700	44	16.79%	National Incident Management System, an Introduction
NIMS (DHS/FEMA) IS-200	38	14.50%	ICS for Single Sources & Initial Action Incidents
CPR/AED	36	13.74%	
NIMS (DHS/FEMA) IS-800	32	12.21%	National Response Framework, an Introduction
EverFi	29	11.07%	Financial Literacy for High School
Microsoft Office Specialist 2016 Word	16	6.11%	
Microsoft Office Specialist 2016 PowerPoint	14	5.34%	
ANSI Approved Certified Food Protection Manager	6	2.29%	

Scotland County Schools 1,522 Total	earned credentials	percent of total	
Conover Credential Workplace Readiness	91	5.98%	
Microsoft Office Specialist 2016 Word	91	5.98%	
Microsoft Office Specialist 2016 PowerPoint	87	5.72%	
First Aid	56	3.68%	
CPR/AED	53	3.48%	
EverFi	52	3.42%	Financial Literacy for High School
OSHA 10-Hour Industry Certification (Healthcare)	49	3.22%	
NIMS (DHS/FEMA) IS-200	47	3.09%	ICS for Single Sources & Initial Action Incidents
NIMS (DHS/FEMA) IS-700	43	2.83%	National Incident Management System, an Introduction
NIMS (DHS/FEMA) IS-800	39	2.56%	National Response Framework, an Introduction

Wayne County Public Schools 4,050 Total	earned credentials	percent of total	
Conover Credential Workplace Readiness	284	7.01%	
Microsoft Office Specialist 2016 Word	281	6.94%	
Microsoft Office Specialist 2016 PowerPoint	275	6.79%	
NIMS (DHS/FEMA) IS-100	123	3.04%	Introduction to Incident Command System
Module 00104 (with Performance Profile)	120	2.96%	Introduction to Power Tools
Module 00103 (with Performance Profile)	119	2.94%	Introduction to Hand Tools
Module 00101 (with Performance Profile)	119	2.94%	Basic Safety
Module 00102	117	2.89%	Introduction to Construction Math
Module 00109 (with Performance Profile)	117	2.89%	Introduction to Material Handling
Module 70101	116	2.86%	Your Role in the Green Environment

CTE Results by North Carolina Public School Unit

PSU	PSU Name	Enrolled	Earned	% Earned
10	Alamance-Burlington Schools	4,751	5,405	113.77%
100	Brunswick County Schools	3,875	2,589	66.81%
110	Buncombe County Schools	4,791	4,479	93.49%
111	Asheville City Schools	647	307	47.45%
120	Burke County Schools	2,156	4,731	219.43%
130	Cabarrus County Schools	6,039	3,006	49.78%
132	Kannapolis City Schools	1,252	1,226	97.92%
13B	Cabarrus Charter Academy	8	9	112.50%
140	Caldwell County Schools	2,267	4,616	203.62%
150	Camden County Schools	449	154	34.30%
160	Carteret County Public Schools	1,772	1,195	67.44%
170	Caswell County Schools	695	382	54.96%
180	Catawba County Schools	4,787	1,822	38.06%
181	Hickory City Schools	671	959	142.92%
182	Newton Conover City Schools	644	784	121.74%
190	Chatham County Schools	1,578	1,601	101.46%
20	Alexander County Schools	1,134	848	74.78%
200	Cherokee County Schools	595	434	72.94%
210	Edenton-Chowan Schools	546	358	65.57%
220	Clay County Schools	260	148	56.92%
230	Cleveland County Schools	3,658	6,554	179.17%
23A	Pinnacle Classical Academy	21	28	133.33%
240	Columbus County Schools	1,379	2,070	150.11%
241	Whiteville City Schools	465	443	95.27%
250	Craven County Schools	2,933	2,109	71.91%
260	Cumberland County Schools	10,377	5,817	56.06%
270	Currituck County Schools	1,558	591	37.93%
280	Dare County Schools	617	1,201	194.65%

NORTH CAROLINA'S SOUTHEAST COMPETITIVE POSITIONING 2020

PSU	PSU Name	Enrolled	Earned	% Earned
290	Davidson County Schools	5,503	4,534	82.39%
291	Lexington City Schools	591	548	92.72%
292	Thomasville City Schools	488	605	123.98%
30	Alleghany County Schools	475	710	149.47%
300	Davie County Schools	1,153	1,747	151.52%
310	Duplin County Schools	2,135	1,907	89.32%
320	Durham Public Schools	4,122	1,224	29.69%
32L	Voyager Academy	467	100	21.41%
330	Edgecombe County Public Schools	1,139	96	8.43%
340	Winston Salem / Forsyth County Schools	6,203	2,015	32.48%
350	Franklin County Schools	2,309	2,579	111.69%
360	Gaston County Schools	6,698	10,811	161.41%
36C	Mountain Island Charter School	22	22	100.00%
370	Gates County Schools	266	176	66.17%
380	Graham County Schools	164	348	212.20%
390	Granville County Schools	1,802	483	26.80%
40	Anson County Schools	867	877	101.15%
400	Greene County Schools	492	1,048	213.01%
410	Guilford County Schools	9,203	6,224	67.63%
420	Halifax County Schools	552	238	43.12%
421	Roanoke Rapids City Schools	782	1,491	190.66%
422	Weldon City Schools	152	97	63.82%
430	Harnett County Schools	4,588	8,415	183.41%
440	Haywood County Schools	1,876	862	45.95%
450	Henderson County Schools	2,759	3,362	121.86%
460	Hertford County Schools	500	80	16.00%
470	Hoke County Schools	1,313	1,271	96.80%
480	Hyde County Schools	52	12	23.08%
490	Iredell-Statesville Schools	3,836	1,583	41.27%
491	Mooresville Graded School District	1,264	1,153	91.22%

NORTH CAROLINA'S SOUTHEAST COMPETITIVE POSITIONING 2020

PSU	PSU Name	Enrolled	Earned	% Earned
50	Ashe County Schools	654	893	136.54%
500	Jackson County Public Schools	466	781	167.60%
510	Johnston County Public Schools	8,830	5,640	63.87%
520	Jones County Schools	72	220	80.88%
530	Lee County Schools	2,211	3,638	164.54%
540	Lenoir County Public Schools	1,714	951	55.48%
550	Lincoln County Schools	1,773	2,514	141.79%
560	Macon County Schools	948	125	13.19%
570	Madison County Schools	426	49	11.50%
580	Martin County Schools	760	259	34.08%
58B	Bear Grass Charter School	259	23	8.88%
590	McDowell County Schools	1,259	2,146	170.45%
60	Avery County Schools	385	131	34.03%
600	Charlotte-Mecklenburg Schools	16,535	8,595	51.98%
610	Mitchell County Schools	555	310	55.86%
620	Montgomery County Schools	917	1,202	131.08%
630	Moore County Schools	2,603	3,679	141.34%
640	Nash-Rocky Mount Schools	3,333	1,734	52.03%
650	New Hanover County Schools	4,487	3,007	67.02%
660	Northampton County Schools	335	42	12.54%
670	Onslow County Schools	5,908	7,676	129.93%
680	Orange County Schools	1,492	639	42.83%
681	Chapel Hill-Carrboro City Schools	1,260	403	31.98%
690	Pamlico County Schools	357	321	89.92%
69A	Arapahoe Charter School	91	6	6.59%
70	Beaufort County Schools	1,636	2,051	125.37%
700	Elizabeth City-Pasquotank Public Schools	1,283	1,846	143.88%
710	Pender County Schools	2,327	4,021	172.80%
720	Perquimans County Schools	423	508	120.09%
730	Person County Schools	1,088	2,619	240.72%

NORTH CAROLINA'S SOUTHEAST COMPETITIVE POSITIONING 2020

PSU	PSU Name	Enrolled	Earned	% Earned
740	Pitt County Schools	4,873	5,747	117.94%
750	Polk County Schools	563	628	111.55%
760	Randolph County School System	4,287	6,563	153.09%
761	Asheboro City Schools	689	308	44.70%
770	Richmond County Schools	1,510	1,469	97.28%
780	Public Schools of Robeson County	5,404	2,541	47.02%
790	Rockingham County Schools	2,294	2,020	88.06%
80	Bertie County Schools	478	101	21.13%
800	Rowan-Salisbury Schools	4,253	5,597	131.60%
810	Rutherford County Schools	3,287	943	28.69%
820	Sampson County Schools	1,916	477	24.90%
821	Clinton City Schools	580	262	45.17%
830	Scotland County Schools	873	1,522	174.34%
840	Stanly County Schools	1,807	2,410	133.37%
850	Stokes County Schools	1,200	1,325	110.42%
860	Surry County Schools	1,830	2,322	126.89%
861	Elkin City Schools	224	150	66.96%
862	Mount Airy City Schools	319	186	58.31%
870	Swain County Schools	346	211	60.98%
880	Transylvania County Schools	923	1,265	137.05%
890	Tyrrell County Schools	114	38	33.33%
90	Bladen County Schools	1,356	2,535	186.95%
900	Union County Public Schools	7,676	6,174	80.43%
910	Vance County Schools	907	211	23.26%
920	Wake County Schools	22,885	16,154	70.59%
930	Warren County Schools	384	176	45.83%
940	Washington County Schools	349	178	51.00%
950	Watauga County Schools	581	157	27.02%
960	Wayne County Public Schools	3,983	4,050	101.68%
970	Wilkes County Schools	2,017	1,841	91.27%

PSU	PSU Name	Enrolled	Earned	% Earned
980	Wilson County Schools	2,230	2,193	98.34%
990	Yadkin County Schools	1,416	1,829	129.17%
995	Yancey County Schools	473	827	174.84%
	Statewide Totals	268,312	236,923	88%

Source: Public Schools of North Carolina. "North Carolina Career and Technical Education 2018-2019 Credentialing Data"

Appendix 3: Target Marketing

Industry Groupings

Industry	Grouping
Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	Aerospace Vehicles and Defense
Aircraft Manufacturing	Aerospace Vehicles and Defense
Aircraft Engine and Engine Parts Manufacturing	Aerospace Vehicles and Defense
Other Aircraft Parts and Auxiliary Equipment Manufacturing	Aerospace Vehicles and Defense
Guided Missile and Space Vehicle Manufacturing	Aerospace Vehicles and Defense
Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing	Aerospace Vehicles and Defense
Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing	Aerospace Vehicles and Defense
Crop Production	Agricultural Inputs and Services
Animal Production	Agricultural Inputs and Services
Cotton Ginning	Agricultural Inputs and Services
Soil Preparation, Planting, and Cultivating	Agricultural Inputs and Services
Crop Harvesting, Primarily by Machine	Agricultural Inputs and Services
Postharvest Crop Activities (except Cotton Ginning)	Agricultural Inputs and Services
Farm Labor Contractors and Crew Leaders	Agricultural Inputs and Services

Farm Management Services	Agricultural Inputs and Services
Support Activities for Animal Production	Agricultural Inputs and Services
Nitrogenous Fertilizer Manufacturing	Agricultural Inputs and Services
Fertilizer (Mixing Only) Manufacturing	Agricultural Inputs and Services
All Other Miscellaneous Textile Product Mills	Apparel
Cut and Sew Apparel Contractors	Apparel
Men's and Boys' Cut and Sew Apparel Manufacturing	Apparel
Women's, Girls', and Infants' Cut and Sew Apparel Manufacturing	Apparel
Other Cut and Sew Apparel Manufacturing	Apparel
Apparel Accessories and Other Apparel Manufacturing	Apparel
Iron Foundries	Automotive
Steel Investment Foundries	Automotive
Steel Foundries (except Investment)	Automotive
Nonferrous Metal Die-Casting Foundries	Automotive
Aluminum Foundries (except Die-Casting)	Automotive
Other Nonferrous Metal Foundries (except Die-Casting)	Automotive
Custom Roll Forming	Automotive
Automobile Manufacturing	Automotive
Light Truck and Utility Vehicle Manufacturing	Automotive
Heavy Duty Truck Manufacturing	Automotive
Motor Vehicle Body Manufacturing	Automotive
Motor Vehicle Gasoline Engine and Engine Parts Manufacturing	Automotive
Motor Vehicle Electrical and Electronic Equipment Manufacturing	Automotive
Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing	Automotive
Motor Vehicle Brake System Manufacturing	Automotive

Motor Vehicle Transmission and Power Train Parts Manufacturing	Automotive
Motor Vehicle Seating and Interior Trim Manufacturing	Automotive
Motor Vehicle Metal Stamping	Automotive
Other Motor Vehicle Parts Manufacturing	Automotive
Military Armored Vehicle, Tank, and Tank Component Manufacturing	Automotive
All Other Transportation Equipment Manufacturing	Automotive
Medicinal and Botanical Manufacturing	Biopharmaceuticals
Pharmaceutical Preparation Manufacturing	Biopharmaceuticals
In-Vitro Diagnostic Substance Manufacturing	Biopharmaceuticals
Biological Product (except Diagnostic) Manufacturing	Biopharmaceuticals
Taxi Service	Business Services
Limousine Service	Business Services
All Other Transit and Ground Passenger Transportation	Business Services
Passenger Car Leasing	Business Services
Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	Business Services
All Other Legal Services	Business Services
Payroll Services	Business Services
Architectural Services	Business Services
Landscape Architectural Services	Business Services
Engineering Services	Business Services
Drafting Services	Business Services
Administrative Management and General Management Consulting Services	Business Services
Human Resources Consulting Services	Business Services
Process, Physical Distribution, and Logistics Consulting Services	Business Services
Other Management Consulting Services	Business Services
Other Scientific and Technical Consulting Services	Business Services
Translation and Interpretation Services	Business Services

All Other Professional, Scientific, and Technical Services	Business Services
Offices of Bank Holding Companies	Business Services
Offices of Other Holding Companies	Business Services
Corporate, Subsidiary, and Regional Managing Offices	Business Services
Facilities Support Services	Business Services
Employment Placement Agencies	Business Services
Executive Search Services	Business Services
Professional Employer Organizations	Business Services
Telephone Answering Services	Business Services
Telemarketing Bureaus and Other Contact Centers	Business Services
Convention and Trade Show Organizers	Business Services
Bituminous Coal and Lignite Surface Mining	Coal Mining
Bituminous Coal Underground Mining	Coal Mining
Anthracite Mining	Coal Mining
Support Activities for Coal Mining	Coal Mining
Telephone Apparatus Manufacturing	Communications Equipment and Services
Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing	Communications Equipment and Services
Other Communications Equipment Manufacturing	Communications Equipment and Services
Primary Battery Manufacturing	Communications Equipment and Services
Cable and Other Subscription Programming	Communications Equipment and Services
Wireless Telecommunications Carriers (except Satellite)	Communications Equipment and Services
Satellite Telecommunications	Communications Equipment and Services
All Other Telecommunications	Communications Equipment and Services

Water Supply and Irrigation Systems	Construction Products and Services
Steam and Air-Conditioning Supply	Construction Products and Services
Industrial Building Construction	Construction Products and Services
Oil and Gas Pipeline and Related Structures Construction	Construction Products and Services
Power and Communication Line and Related Structures Construction	Construction Products and Services
Other Heavy and Civil Engineering Construction	Construction Products and Services
Asphalt Paving Mixture and Block Manufacturing	Construction Products and Services
Asphalt Shingle and Coating Materials Manufacturing	Construction Products and Services
Cement Manufacturing	Construction Products and Services
Concrete Block and Brick Manufacturing	Construction Products and Services
Concrete Pipe Manufacturing	Construction Products and Services
Lime Manufacturing	Construction Products and Services
Gypsum Product Manufacturing	Construction Products and Services
Cut Stone and Stone Product Manufacturing	Construction Products and Services
Mineral Wool Manufacturing	Construction Products and Services
All Other Miscellaneous Nonmetallic Mineral Product Manufacturing	Construction Products and Services
Power Boiler and Heat Exchanger Manufacturing	Construction Products and Services

Metal Tank (Heavy Gauge) Manufacturing	Construction Products and Services
Plumbing Fixture Fitting and Trim Manufacturing	Construction Products and Services
Fabricated Pipe and Pipe Fitting Manufacturing	Construction Products and Services
Furniture Merchant Wholesalers	Distribution and Electronic Commerce
Home Furnishing Merchant Wholesalers	Distribution and Electronic Commerce
Photographic Equipment and Supplies Merchant Wholesalers	Distribution and Electronic Commerce
Office Equipment Merchant Wholesalers	Distribution and Electronic Commerce
Computer and Computer Peripheral Equipment and Software Merchant Wholesalers	Distribution and Electronic Commerce
Other Commercial Equipment Merchant Wholesalers	Distribution and Electronic Commerce
Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers	Distribution and Electronic Commerce
Ophthalmic Goods Merchant Wholesalers	Distribution and Electronic Commerce
Other Professional Equipment and Supplies Merchant Wholesalers	Distribution and Electronic Commerce
Metal Service Centers and Other Metal Merchant Wholesalers	Distribution and Electronic Commerce
Coal and Other Mineral and Ore Merchant Wholesalers	Distribution and Electronic Commerce
Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	Distribution and Electronic Commerce
Household Appliances, Electric Housewares, and Consumer Electronics Merchant Wholesalers	Distribution and Electronic Commerce
Other Electronic Parts and Equipment Merchant Wholesalers	Distribution and Electronic Commerce

Construction and Mining (except Oil Well) Machinery and Equipment Merchant Wholesalers	Distribution and Electronic Commerce
Farm and Garden Machinery and Equipment Merchant Wholesalers	Distribution and Electronic Commerce
Industrial Machinery and Equipment Merchant Wholesalers	Distribution and Electronic Commerce
Industrial Supplies Merchant Wholesalers	Distribution and Electronic Commerce
Service Establishment Equipment and Supplies Merchant Wholesalers	Distribution and Electronic Commerce
Transportation Equipment and Supplies (except Motor Vehicle) Merchant Wholesalers	Distribution and Electronic Commerce
Sporting and Recreational Goods and Supplies Merchant Wholesalers	Distribution and Electronic Commerce
Toy and Hobby Goods and Supplies Merchant Wholesalers	Distribution and Electronic Commerce
Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers	Distribution and Electronic Commerce
Printing and Writing Paper Merchant Wholesalers	Distribution and Electronic Commerce
Stationery and Office Supplies Merchant Wholesalers	Distribution and Electronic Commerce
Industrial and Personal Service Paper Merchant Wholesalers	Distribution and Electronic Commerce
Drugs and Druggists' Sundries Merchant Wholesalers	Distribution and Electronic Commerce
Piece Goods, Notions, and Other Dry Goods Merchant Wholesalers	Distribution and Electronic Commerce
Men's and Boys' Clothing and Furnishings Merchant Wholesalers	Distribution and Electronic Commerce
Women's, Children's, and Infants' Clothing and Accessories Merchant Wholesalers	Distribution and Electronic Commerce
Footwear Merchant Wholesalers	Distribution and Electronic Commerce

Poultry and Poultry Product Merchant Wholesalers	Distribution and Electronic Commerce
Fish and Seafood Merchant Wholesalers	Distribution and Electronic Commerce
Meat and Meat Product Merchant Wholesalers	Distribution and Electronic Commerce
Fresh Fruit and Vegetable Merchant Wholesalers	Distribution and Electronic Commerce
Other Farm Product Raw Material Merchant Wholesalers	Distribution and Electronic Commerce
Plastics Materials and Basic Forms and Shapes Merchant Wholesalers	Distribution and Electronic Commerce
Other Chemical and Allied Products Merchant Wholesalers	Distribution and Electronic Commerce
Petroleum Bulk Stations and Terminals	Distribution and Electronic Commerce
Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)	Distribution and Electronic Commerce
Wine and Distilled Alcoholic Beverage Merchant Wholesalers	Distribution and Electronic Commerce
Farm Supplies Merchant Wholesalers	Distribution and Electronic Commerce
Book, Periodical, and Newspaper Merchant Wholesalers	Distribution and Electronic Commerce
Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers	Distribution and Electronic Commerce
Tobacco and Tobacco Product Merchant Wholesalers	Distribution and Electronic Commerce
Paint, Varnish, and Supplies Merchant Wholesalers	Distribution and Electronic Commerce
Other Miscellaneous Nondurable Goods Merchant Wholesalers	Distribution and Electronic Commerce
Business to Business Electronic Markets	Distribution and Electronic Commerce

Wholesale Trade Agents and Brokers	Distribution and Electronic Commerce
Electronic Shopping and Mail-Order Houses	Distribution and Electronic Commerce
General Warehousing and Storage	Distribution and Electronic Commerce
Refrigerated Warehousing and Storage	Distribution and Electronic Commerce
Farm Product Warehousing and Storage	Distribution and Electronic Commerce
Other Warehousing and Storage	Distribution and Electronic Commerce
Commercial Air, Rail, and Water Transportation Equipment Rental and Leasing	Distribution and Electronic Commerce
Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	Distribution and Electronic Commerce
Office Machinery and Equipment Rental and Leasing	Distribution and Electronic Commerce
Other Commercial and Industrial Machinery and Equipment Rental and Leasing	Distribution and Electronic Commerce
All Other Business Support Services	Distribution and Electronic Commerce
Packaging and Labeling Services	Distribution and Electronic Commerce
Petroleum Lubricating Oil and Grease Manufacturing	Downstream Chemical Products
Synthetic Dye and Pigment Manufacturing	Downstream Chemical Products
Paint and Coating Manufacturing	Downstream Chemical Products
Adhesive Manufacturing	Downstream Chemical Products
Soap and Other Detergent Manufacturing	Downstream Chemical Products

Polish and Other Sanitation Good Manufacturing	Downstream Chemical Products
Surface Active Agent Manufacturing	Downstream Chemical Products
Toilet Preparation Manufacturing	Downstream Chemical Products
Explosives Manufacturing	Downstream Chemical Products
Custom Compounding of Purchased Resins	Downstream Chemical Products
Photographic Film, Paper, Plate, and Chemical Manufacturing	Downstream Chemical Products
All Other Miscellaneous Chemical Product and Preparation Manufacturing	Downstream Chemical Products
Metal Kitchen Cookware, Utensil, Cutlery, and Flatware (except Precious) Manufacturing	Downstream Metal Products
Saw Blade and Handtool Manufacturing	Downstream Metal Products
Prefabricated Metal Building and Component Manufacturing	Downstream Metal Products
Fabricated Structural Metal Manufacturing	Downstream Metal Products
Metal Window and Door Manufacturing	Downstream Metal Products
Sheet Metal Work Manufacturing	Downstream Metal Products
Ornamental and Architectural Metal Work Manufacturing	Downstream Metal Products
Metal Can Manufacturing	Downstream Metal Products
Other Metal Container Manufacturing	Downstream Metal Products
Hardware Manufacturing	Downstream Metal Products
Small Arms Ammunition Manufacturing	Downstream Metal Products
Ammunition (except Small Arms) Manufacturing	Downstream Metal Products
Small Arms, Ordnance, and Ordnance Accessories Manufacturing	Downstream Metal Products
All Other Miscellaneous Fabricated Metal Product Manufacturing	Downstream Metal Products
Research and Development in Nanotechnology	Education and Knowledge Creation

Research and Development in Biotechnology (except Nanobiotechnology)	Education and Knowledge Creation
Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)	Education and Knowledge Creation
Research and Development in the Social Sciences and Humanities	Education and Knowledge Creation
Junior Colleges	Education and Knowledge Creation
Colleges, Universities, and Professional Schools	Education and Knowledge Creation
Business and Secretarial Schools	Education and Knowledge Creation
Computer Training	Education and Knowledge Creation
Professional and Management Development Training	Education and Knowledge Creation
Flight Training	Education and Knowledge Creation
Apprenticeship Training	Education and Knowledge Creation
Language Schools	Education and Knowledge Creation
Exam Preparation and Tutoring	Education and Knowledge Creation
All Other Miscellaneous Schools and Instruction	Education and Knowledge Creation
Educational Support Services	Education and Knowledge Creation
Professional Organizations	Education and Knowledge Creation
Colleges, Universities, and Professional Schools (State Government)	Education and Knowledge Creation
All Other Schools and Educational Support Services (State Government)	Education and Knowledge Creation

Colleges, Universities, and Professional Schools (Local Government)	Education and Knowledge Creation
All Other Schools and Educational Support Services (Local Government)	Education and Knowledge Creation
Hydroelectric Power Generation	Electric Power Generation and Transmission
Fossil Fuel Electric Power Generation	Electric Power Generation and Transmission
Nuclear Electric Power Generation	Electric Power Generation and Transmission
Solar Electric Power Generation	Electric Power Generation and Transmission
Wind Electric Power Generation	Electric Power Generation and Transmission
Geothermal Electric Power Generation	Electric Power Generation and Transmission
Biomass Electric Power Generation	Electric Power Generation and Transmission
Other Electric Power Generation	Electric Power Generation and Transmission
Electric Bulk Power Transmission and Control	Electric Power Generation and Transmission
Hazardous Waste Collection	Environmental Services
Other Waste Collection	Environmental Services
Hazardous Waste Treatment and Disposal	Environmental Services
Solid Waste Combustors and Incinerators	Environmental Services
Other Nonhazardous Waste Treatment and Disposal	Environmental Services
Materials Recovery Facilities	Environmental Services
All Other Miscellaneous Waste Management Services	Environmental Services
US Postal Service	Federal Government Services
Federal Government, Civilian, Excluding Postal Service	Federal Government Services
Federal Government, Military	Federal Government Services

Monetary Authorities-Central Bank	Financial Services
Savings Institutions	Financial Services
Other Depository Credit Intermediation	Financial Services
Credit Card Issuing	Financial Services
Sales Financing	Financial Services
Consumer Lending	Financial Services
Real Estate Credit	Financial Services
International Trade Financing	Financial Services
Secondary Market Financing	Financial Services
All Other Nondepository Credit Intermediation	Financial Services
Mortgage and Nonmortgage Loan Brokers	Financial Services
Financial Transactions Processing, Reserve, and Clearinghouse Activities	Financial Services
Other Activities Related to Credit Intermediation	Financial Services
Investment Banking and Securities Dealing	Financial Services
Securities Brokerage	Financial Services
Commodity Contracts Dealing	Financial Services
Commodity Contracts Brokerage	Financial Services
Securities and Commodity Exchanges	Financial Services
Miscellaneous Intermediation	Financial Services
Portfolio Management	Financial Services
Investment Advice	Financial Services
Trust, Fiduciary, and Custody Activities	Financial Services
Miscellaneous Financial Investment Activities	Financial Services
Open-End Investment Funds	Financial Services
Other Financial Vehicles	Financial Services
Credit Bureaus	Financial Services
Finfish Fishing	Fishing and Fishing Products

Shellfish Fishing	Fishing and Fishing Products
Other Marine Fishing	Fishing and Fishing Products
Seafood Product Preparation and Packaging	Fishing and Fishing Products
Dog and Cat Food Manufacturing	Food Processing and Manufacturing
Other Animal Food Manufacturing	Food Processing and Manufacturing
Flour Milling	Food Processing and Manufacturing
Rice Milling	Food Processing and Manufacturing
Malt Manufacturing	Food Processing and Manufacturing
Wet Corn Milling	Food Processing and Manufacturing
Soybean and Other Oilseed Processing	Food Processing and Manufacturing
Fats and Oils Refining and Blending	Food Processing and Manufacturing
Breakfast Cereal Manufacturing	Food Processing and Manufacturing
Beet Sugar Manufacturing	Food Processing and Manufacturing
Cane Sugar Manufacturing	Food Processing and Manufacturing
Nonchocolate Confectionery Manufacturing	Food Processing and Manufacturing
Chocolate and Confectionery Manufacturing from Cacao Beans	Food Processing and Manufacturing
Confectionery Manufacturing from Purchased Chocolate	Food Processing and Manufacturing
Frozen Fruit, Juice, and Vegetable Manufacturing	Food Processing and Manufacturing

Frozen Specialty Food Manufacturing	Food Processing and Manufacturing
Fruit and Vegetable Canning	Food Processing and Manufacturing
Specialty Canning	Food Processing and Manufacturing
Dried and Dehydrated Food Manufacturing	Food Processing and Manufacturing
Fluid Milk Manufacturing	Food Processing and Manufacturing
Creamery Butter Manufacturing	Food Processing and Manufacturing
Cheese Manufacturing	Food Processing and Manufacturing
Dry, Condensed, and Evaporated Dairy Product Manufacturing	Food Processing and Manufacturing
Ice Cream and Frozen Dessert Manufacturing	Food Processing and Manufacturing
Frozen Cakes, Pies, and Other Pastries Manufacturing	Food Processing and Manufacturing
Cookie and Cracker Manufacturing	Food Processing and Manufacturing
Dry Pasta, Dough, and Flour Mixes Manufacturing from Purchased Flour	Food Processing and Manufacturing
Tortilla Manufacturing	Food Processing and Manufacturing
Roasted Nuts and Peanut Butter Manufacturing	Food Processing and Manufacturing
Other Snack Food Manufacturing	Food Processing and Manufacturing
Coffee and Tea Manufacturing	Food Processing and Manufacturing
Flavoring Syrup and Concentrate Manufacturing	Food Processing and Manufacturing

Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing	Food Processing and Manufacturing
Spice and Extract Manufacturing	Food Processing and Manufacturing
Perishable Prepared Food Manufacturing	Food Processing and Manufacturing
All Other Miscellaneous Food Manufacturing	Food Processing and Manufacturing
Soft Drink Manufacturing	Food Processing and Manufacturing
Bottled Water Manufacturing	Food Processing and Manufacturing
Ice Manufacturing	Food Processing and Manufacturing
Breweries	Food Processing and Manufacturing
Wineries	Food Processing and Manufacturing
Distilleries	Food Processing and Manufacturing
Glass Container Manufacturing	Food Processing and Manufacturing
Grain and Field Bean Merchant Wholesalers	Food Processing and Manufacturing
Leather and Hide Tanning and Finishing	Footwear
Footwear Manufacturing	Footwear
Timber Tract Operations	Forestry
Forest Nurseries and Gathering of Forest Products	Forestry
Logging	Forestry
Support Activities for Forestry	Forestry
Manufactured Home (Mobile Home) Manufacturing	Furniture
Wood Kitchen Cabinet and Countertop Manufacturing	Furniture

Upholstered Household Furniture Manufacturing	Furniture
Nonupholstered Wood Household Furniture Manufacturing	Furniture
Metal Household Furniture Manufacturing	Furniture
Household Furniture (except Wood and Metal) Manufacturing	Furniture
Institutional Furniture Manufacturing	Furniture
Wood Office Furniture Manufacturing	Furniture
Office Furniture (except Wood) Manufacturing	Furniture
Showcase, Partition, Shelving, and Locker Manufacturing	Furniture
Mattress Manufacturing	Furniture
Dental Laboratories	Local Health Services
Pharmacies and Drug Stores	Local Health Services
Optical Goods Stores	Local Health Services
Home Health Equipment Rental	Local Health Services
Offices of Physicians (except Mental Health Specialists)	Local Health Services
Offices of Physicians, Mental Health Specialists	Local Health Services
Offices of Dentists	Local Health Services
Offices of Chiropractors	Local Health Services
Offices of Optometrists	Local Health Services
Offices of Mental Health Practitioners (except Physicians)	Local Health Services
Offices of Physical, Occupational and Speech Therapists, and Audiologists	Local Health Services
Offices of Podiatrists	Local Health Services
Offices of All Other Miscellaneous Health Practitioners	Local Health Services
Family Planning Centers	Local Health Services
Outpatient Mental Health and Substance Abuse Centers	Local Health Services
HMO Medical Centers	Local Health Services
Kidney Dialysis Centers	Local Health Services
Freestanding Ambulatory Surgical and Emergency Centers	Local Health Services

All Other Outpatient Care Centers	Local Health Services
Medical Laboratories	Local Health Services
Diagnostic Imaging Centers	Local Health Services
Home Health Care Services	Local Health Services
Blood and Organ Banks	Local Health Services
All Other Miscellaneous Ambulatory Health Care Services	Local Health Services
General Medical and Surgical Hospitals	Local Health Services
Psychiatric and Substance Abuse Hospitals	Local Health Services
Specialty (except Psychiatric and Substance Abuse) Hospitals	Local Health Services
Nursing Care Facilities (Skilled Nursing Facilities)	Local Health Services
Residential Intellectual and Developmental Disability Facilities	Local Health Services
Residential Mental Health and Substance Abuse Facilities	Local Health Services
Continuing Care Retirement Communities	Local Health Services
Assisted Living Facilities for the Elderly	Local Health Services
Other Residential Care Facilities	Local Health Services
Funeral Homes and Funeral Services	Local Health Services
Cemeteries and Crematories	Local Health Services
Hospitals (State Government)	Local Health Services
Hospitals (Local Government)	Local Health Services
Hunting and Trapping	Hospitality and Tourism
Art Dealers	Hospitality and Tourism
Scenic and Sightseeing Transportation, Land	Hospitality and Tourism
Scenic and Sightseeing Transportation, Water	Hospitality and Tourism
Scenic and Sightseeing Transportation, Other	Hospitality and Tourism
Recreational Goods Rental	Hospitality and Tourism
Travel Agencies	Hospitality and Tourism
Tour Operators	Hospitality and Tourism
Convention and Visitors Bureaus	Hospitality and Tourism

All Other Travel Arrangement and Reservation Services	Hospitality and Tourism
Sports Teams and Clubs	Hospitality and Tourism
Racetracks	Hospitality and Tourism
Other Spectator Sports	Hospitality and Tourism
Museums	Hospitality and Tourism
Historical Sites	Hospitality and Tourism
Zoos and Botanical Gardens	Hospitality and Tourism
Nature Parks and Other Similar Institutions	Hospitality and Tourism
Amusement and Theme Parks	Hospitality and Tourism
Amusement Arcades	Hospitality and Tourism
Casinos (except Casino Hotels)	Hospitality and Tourism
Other Gambling Industries	Hospitality and Tourism
Skiing Facilities	Hospitality and Tourism
Marinas	Hospitality and Tourism
All Other Amusement and Recreation Industries	Hospitality and Tourism
Hotels (except Casino Hotels) and Motels	Hospitality and Tourism
Casino Hotels	Hospitality and Tourism
Bed-and-Breakfast Inns	Hospitality and Tourism
All Other Traveler Accommodation	Hospitality and Tourism
RV (Recreational Vehicle) Parks and Campgrounds	Hospitality and Tourism
Recreational and Vacation Camps (except Campgrounds)	Hospitality and Tourism
Rooming and Boarding Houses, Dormitories, and Workers' Camps	Hospitality and Tourism
Semiconductor Machinery Manufacturing	Information Technology and Analytical Instruments
Photographic and Photocopying Equipment Manufacturing	Information Technology and Analytical Instruments
Electronic Computer Manufacturing	Information Technology and Analytical Instruments

Computer Storage Device Manufacturing	Information Technology and Analytical Instruments
Computer Terminal and Other Computer Peripheral Equipment Manufacturing	Information Technology and Analytical Instruments
Audio and Video Equipment Manufacturing	Information Technology and Analytical Instruments
Bare Printed Circuit Board Manufacturing	Information Technology and Analytical Instruments
Semiconductor and Related Device Manufacturing	Information Technology and Analytical Instruments
Capacitor, Resistor, Coil, Transformer, and Other Inductor Manufacturing	Information Technology and Analytical Instruments
Electronic Connector Manufacturing	Information Technology and Analytical Instruments
Printed Circuit Assembly (Electronic Assembly) Manufacturing	Information Technology and Analytical Instruments
Other Electronic Component Manufacturing	Information Technology and Analytical Instruments
Electromedical and Electrotherapeutic Apparatus Manufacturing	Information Technology and Analytical Instruments
Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use	Information Technology and Analytical Instruments
Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables	Information Technology and Analytical Instruments
Totalizing Fluid Meter and Counting Device Manufacturing	Information Technology and Analytical Instruments
Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals	Information Technology and Analytical Instruments
Analytical Laboratory Instrument Manufacturing	Information Technology and Analytical Instruments
Irradiation Apparatus Manufacturing	Information Technology and Analytical Instruments
Other Measuring and Controlling Device Manufacturing	Information Technology and Analytical Instruments

Blank Magnetic and Optical Recording Media Manufacturing	Information Technology and Analytical Instruments
Software and Other Prerecorded Compact Disc, Tape, and Record Reproducing	Information Technology and Analytical Instruments
Software Publishers	Information Technology and Analytical Instruments
Custom Computer Programming Services	Information Technology and Analytical Instruments
Computer Systems Design Services	Information Technology and Analytical Instruments
Computer Facilities Management Services	Information Technology and Analytical Instruments
Other Computer Related Services	Information Technology and Analytical Instruments
Data Processing, Hosting, and Related Services	Information Technology and Analytical Instruments
Direct Life Insurance Carriers	Insurance Services
Direct Health and Medical Insurance Carriers	Insurance Services
Direct Property and Casualty Insurance Carriers	Insurance Services
Direct Title Insurance Carriers	Insurance Services
Other Direct Insurance (except Life, Health, and Medical) Carriers	Insurance Services
Reinsurance Carriers	Insurance Services
Claims Adjusting	Insurance Services
All Other Insurance Related Activities	Insurance Services
Pension Funds	Insurance Services
Health and Welfare Funds	Insurance Services
Other Insurance Funds	Insurance Services
Trusts, Estates, and Agency Accounts	Insurance Services
Jewelry and Silverware Manufacturing	Jewelry and Precious Metals
Textile Bag and Canvas Mills	Leather and Related Products

Women's Handbag and Purse Manufacturing	Leather and Related Products
All Other Leather Good and Allied Product Manufacturing	Leather and Related Products
Electric Lamp Bulb and Part Manufacturing	Lighting and Electrical Equipment
Residential Electric Lighting Fixture Manufacturing	Lighting and Electrical Equipment
Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing	Lighting and Electrical Equipment
Other Lighting Equipment Manufacturing	Lighting and Electrical Equipment
Power, Distribution, and Specialty Transformer Manufacturing	Lighting and Electrical Equipment
Motor and Generator Manufacturing	Lighting and Electrical Equipment
Switchgear and Switchboard Apparatus Manufacturing	Lighting and Electrical Equipment
Relay and Industrial Control Manufacturing	Lighting and Electrical Equipment
Storage Battery Manufacturing	Lighting and Electrical Equipment
Fiber Optic Cable Manufacturing	Lighting and Electrical Equipment
Other Communication and Energy Wire Manufacturing	Lighting and Electrical Equipment
Current-Carrying Wiring Device Manufacturing	Lighting and Electrical Equipment
Noncurrent-Carrying Wiring Device Manufacturing	Lighting and Electrical Equipment
Carbon and Graphite Product Manufacturing	Lighting and Electrical Equipment
All Other Miscellaneous Electrical Equipment and Component Manufacturing	Lighting and Electrical Equipment

Animal (except Poultry) Slaughtering	Livestock Processing
Meat Processed from Carcasses	Livestock Processing
Rendering and Meat Byproduct Processing	Livestock Processing
Poultry Processing	Livestock Processing
Livestock Merchant Wholesalers	Livestock Processing
Periodical Publishers	Marketing, Design, and Publishing
Book Publishers	Marketing, Design, and Publishing
Directory and Mailing List Publishers	Marketing, Design, and Publishing
All Other Publishers	Marketing, Design, and Publishing
News Syndicates	Marketing, Design, and Publishing
Libraries and Archives	Marketing, Design, and Publishing
Internet Publishing and Broadcasting and Web Search Portals	Marketing, Design, and Publishing
All Other Information Services	Marketing, Design, and Publishing
Interior Design Services	Marketing, Design, and Publishing
Industrial Design Services	Marketing, Design, and Publishing
Graphic Design Services	Marketing, Design, and Publishing
Other Specialized Design Services	Marketing, Design, and Publishing
Marketing Consulting Services	Marketing, Design, and Publishing
Advertising Agencies	Marketing, Design, and Publishing

Public Relations Agencies	Marketing, Design, and Publishing
Media Buying Agencies	Marketing, Design, and Publishing
Media Representatives	Marketing, Design, and Publishing
Outdoor Advertising	Marketing, Design, and Publishing
Direct Mail Advertising	Marketing, Design, and Publishing
Advertising Material Distribution Services	Marketing, Design, and Publishing
Other Services Related to Advertising	Marketing, Design, and Publishing
Marketing Research and Public Opinion Polling	Marketing, Design, and Publishing
Optical Instrument and Lens Manufacturing	Medical Devices
Surgical and Medical Instrument Manufacturing	Medical Devices
Surgical Appliance and Supplies Manufacturing	Medical Devices
Dental Equipment and Supplies Manufacturing	Medical Devices
Ophthalmic Goods Manufacturing	Medical Devices
Iron Ore Mining	Metal Mining
Gold Ore Mining	Metal Mining
Silver Ore Mining	Metal Mining
Copper, Nickel, Lead, and Zinc Mining	Metal Mining
Uranium-Radium-Vanadium Ore Mining	Metal Mining
All Other Metal Ore Mining	Metal Mining
Support Activities for Metal Mining	Metal Mining
Abrasive Product Manufacturing	Metalworking Technology
Plate Work Manufacturing	Metalworking Technology
Precision Turned Product Manufacturing	Metalworking Technology

Bolt, Nut, Screw, Rivet, and Washer Manufacturing	Metalworking Technology
Metal Heat Treating	Metalworking Technology
Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	Metalworking Technology
Electroplating, Plating, Polishing, Anodizing, and Coloring	Metalworking Technology
Industrial Mold Manufacturing	Metalworking Technology
Special Die and Tool, Die Set, Jig, and Fixture Manufacturing	Metalworking Technology
Cutting Tool and Machine Tool Accessory Manufacturing	Metalworking Technology
Machine Tool Manufacturing	Metalworking Technology
Rolling Mill and Other Metalworking Machinery Manufacturing	Metalworking Technology
Power-Driven Handtool Manufacturing	Metalworking Technology
Welding and Soldering Equipment Manufacturing	Metalworking Technology
Music Publishers	Music and Sound Recording
Sound Recording Studios	Music and Sound Recording
Record Production and Distribution	Music and Sound Recording
Other Sound Recording Industries	Music and Sound Recording
Dimension Stone Mining and Quarrying	Nonmetal Mining
Crushed and Broken Limestone Mining and Quarrying	Nonmetal Mining
Crushed and Broken Granite Mining and Quarrying	Nonmetal Mining
Other Crushed and Broken Stone Mining and Quarrying	Nonmetal Mining
Construction Sand and Gravel Mining	Nonmetal Mining
Industrial Sand Mining	Nonmetal Mining
Kaolin and Ball Clay Mining	Nonmetal Mining
Clay and Ceramic and Refractory Minerals Mining	Nonmetal Mining
Potash, Soda, and Borate Mineral Mining	Nonmetal Mining
Phosphate Rock Mining	Nonmetal Mining
Other Chemical and Fertilizer Mineral Mining	Nonmetal Mining
All Other Nonmetallic Mineral Mining	Nonmetal Mining

Support Activities for Nonmetallic Minerals (except Fuels) Mining	Nonmetal Mining
Crude Petroleum Extraction	Oil and Gas Production and Transportation
Natural Gas Extraction	Oil and Gas Production and Transportation
Drilling Oil and Gas Wells	Oil and Gas Production and Transportation
Support Activities for Oil and Gas Operations	Oil and Gas Production and Transportation
Petroleum Refineries	Oil and Gas Production and Transportation
All Other Petroleum and Coal Products Manufacturing	Oil and Gas Production and Transportation
Oil and Gas Field Machinery and Equipment Manufacturing	Oil and Gas Production and Transportation
Pipeline Transportation of Crude Oil	Oil and Gas Production and Transportation
Pipeline Transportation of Natural Gas	Oil and Gas Production and Transportation
Pipeline Transportation of Refined Petroleum Products	Oil and Gas Production and Transportation
All Other Pipeline Transportation	Oil and Gas Production and Transportation
Geophysical Surveying and Mapping Services	Oil and Gas Production and Transportation
Pulp Mills	Paper and Packaging
Paper (except Newsprint) Mills	Paper and Packaging
Newsprint Mills	Paper and Packaging
Paperboard Mills	Paper and Packaging
Corrugated and Solid Fiber Box Manufacturing	Paper and Packaging
Folding Paperboard Box Manufacturing	Paper and Packaging
Other Paperboard Container Manufacturing	Paper and Packaging

Paper Bag and Coated and Treated Paper Manufacturing	Paper and Packaging
Stationery Product Manufacturing	Paper and Packaging
Sanitary Paper Product Manufacturing	Paper and Packaging
All Other Converted Paper Product Manufacturing	Paper and Packaging
Theater Companies and Dinner Theaters	Performing Arts
Dance Companies	Performing Arts
Musical Groups and Artists	Performing Arts
Other Performing Arts Companies	Performing Arts
Promoters of Performing Arts, Sports, and Similar Events with Facilities	Performing Arts
Promoters of Performing Arts, Sports, and Similar Events without Facilities	Performing Arts
Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures	Performing Arts
Independent Artists, Writers, and Performers	Performing Arts
Plastics Material and Resin Manufacturing	Plastics
Plastics Bag and Pouch Manufacturing	Plastics
Plastics Packaging Film and Sheet (including Laminated) Manufacturing	Plastics
Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing	Plastics
Unlaminated Plastics Profile Shape Manufacturing	Plastics
Plastics Pipe and Pipe Fitting Manufacturing	Plastics
Laminated Plastics Plate, Sheet (except Packaging), and Shape Manufacturing	Plastics
Polystyrene Foam Product Manufacturing	Plastics
Urethane and Other Foam Product (except Polystyrene) Manufacturing	Plastics
Plastics Bottle Manufacturing	Plastics
Plastics Plumbing Fixture Manufacturing	Plastics

All Other Plastics Product Manufacturing	Plastics
Broom, Brush, and Mop Manufacturing	Plastics
Commercial Printing (except Screen and Books)	Printing Services
Commercial Screen Printing	Printing Services
Books Printing	Printing Services
Support Activities for Printing	Printing Services
Printing Ink Manufacturing	Printing Services
Greeting Card Publishers	Printing Services
Industrial Valve Manufacturing	Production Technology and Heavy Machinery
Fluid Power Valve and Hose Fitting Manufacturing	Production Technology and Heavy Machinery
Other Metal Valve and Pipe Fitting Manufacturing	Production Technology and Heavy Machinery
Ball and Roller Bearing Manufacturing	Production Technology and Heavy Machinery
Farm Machinery and Equipment Manufacturing	Production Technology and Heavy Machinery
Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing	Production Technology and Heavy Machinery
Construction Machinery Manufacturing	Production Technology and Heavy Machinery
Mining Machinery and Equipment Manufacturing	Production Technology and Heavy Machinery
Food Product Machinery Manufacturing	Production Technology and Heavy Machinery
Sawmill, Woodworking, and Paper Machinery Manufacturing	Production Technology and Heavy Machinery
Printing Machinery and Equipment Manufacturing	Production Technology and Heavy Machinery
Other Industrial Machinery Manufacturing	Production Technology and Heavy Machinery

Other Commercial and Service Industry Machinery Manufacturing	Production Technology and Heavy Machinery
Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing	Production Technology and Heavy Machinery
Heating Equipment (except Warm Air Furnaces) Manufacturing	Production Technology and Heavy Machinery
Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	Production Technology and Heavy Machinery
Turbine and Turbine Generator Set Units Manufacturing	Production Technology and Heavy Machinery
Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing	Production Technology and Heavy Machinery
Mechanical Power Transmission Equipment Manufacturing	Production Technology and Heavy Machinery
Other Engine Equipment Manufacturing	Production Technology and Heavy Machinery
Air and Gas Compressor Manufacturing	Production Technology and Heavy Machinery
Measuring, Dispensing, and Other Pumping Equipment Manufacturing	Production Technology and Heavy Machinery
Elevator and Moving Stairway Manufacturing	Production Technology and Heavy Machinery
Conveyor and Conveying Equipment Manufacturing	Production Technology and Heavy Machinery
Overhead Traveling Crane, Hoist, and Monorail System Manufacturing	Production Technology and Heavy Machinery
Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing	Production Technology and Heavy Machinery
Packaging Machinery Manufacturing	Production Technology and Heavy Machinery
Industrial Process Furnace and Oven Manufacturing	Production Technology and Heavy Machinery
Fluid Power Cylinder and Actuator Manufacturing	Production Technology and Heavy Machinery

Fluid Power Pump and Motor Manufacturing	Production Technology and Heavy Machinery
Scale and Balance Manufacturing	Production Technology and Heavy Machinery
All Other Miscellaneous General Purpose Machinery Manufacturing	Production Technology and Heavy Machinery
Railroad Rolling Stock Manufacturing	Production Technology and Heavy Machinery
Gasket, Packing, and Sealing Device Manufacturing	Production Technology and Heavy Machinery
Small Electrical Appliance Manufacturing	Recreational and Small Electric Goods
Motorcycle, Bicycle, and Parts Manufacturing	Recreational and Small Electric Goods
Blind and Shade Manufacturing	Recreational and Small Electric Goods
Sporting and Athletic Goods Manufacturing	Recreational and Small Electric Goods
Doll, Toy, and Game Manufacturing	Recreational and Small Electric Goods
Office Supplies (except Paper) Manufacturing	Recreational and Small Electric Goods
Musical Instrument Manufacturing	Recreational and Small Electric Goods
Fastener, Button, Needle, and Pin Manufacturing	Recreational and Small Electric Goods
All Other Miscellaneous Manufacturing	Recreational and Small Electric Goods
State Government, Excluding Education and Hospitals	State Government Services
Fiber, Yarn, and Thread Mills	Textile Manufacturing
Broadwoven Fabric Mills	Textile Manufacturing
Narrow Fabric Mills and Schiffli Machine Embroidery	Textile Manufacturing
Nonwoven Fabric Mills	Textile Manufacturing

Knit Fabric Mills	Textile Manufacturing
Textile and Fabric Finishing Mills	Textile Manufacturing
Fabric Coating Mills	Textile Manufacturing
Carpet and Rug Mills	Textile Manufacturing
Curtain and Linen Mills	Textile Manufacturing
Rope, Cordage, Twine, Tire Cord, and Tire Fabric Mills	Textile Manufacturing
Hosiery and Sock Mills	Textile Manufacturing
Other Apparel Knitting Mills	Textile Manufacturing
Artificial and Synthetic Fibers and Filaments Manufacturing	Textile Manufacturing
Tobacco Manufacturing	Tobacco
Major Household Appliance Manufacturing	Trailers, Motor Homes, and Appliances
Truck Trailer Manufacturing	Trailers, Motor Homes, and Appliances
Motor Home Manufacturing	Trailers, Motor Homes, and Appliances
Travel Trailer and Camper Manufacturing	Trailers, Motor Homes, and Appliances
Burial Casket Manufacturing	Trailers, Motor Homes, and Appliances
Scheduled Passenger Air Transportation	Transportation and Logistics
Scheduled Freight Air Transportation	Transportation and Logistics
Nonscheduled Chartered Passenger Air Transportation	Transportation and Logistics
Nonscheduled Chartered Freight Air Transportation	Transportation and Logistics
Other Nonscheduled Air Transportation	Transportation and Logistics
Rail transportation	Transportation and Logistics
General Freight Trucking, Long-Distance, Truckload	Transportation and Logistics
General Freight Trucking, Long-Distance, Less Than Truckload	Transportation and Logistics
Specialized Freight (except Used Goods) Trucking, Long-Distance	Transportation and Logistics
Interurban and Rural Bus Transportation	Transportation and Logistics

Charter Bus Industry	Transportation and Logistics
Air Traffic Control	Transportation and Logistics
Other Airport Operations	Transportation and Logistics
Other Support Activities for Air Transportation	Transportation and Logistics
Support Activities for Rail Transportation	Transportation and Logistics
Other Support Activities for Road Transportation	Transportation and Logistics
Freight Transportation Arrangement	Transportation and Logistics
Packing and Crating	Transportation and Logistics
All Other Support Activities for Transportation	Transportation and Logistics
Postal Service	Transportation and Logistics
Petrochemical Manufacturing	Upstream Chemical Products
Industrial Gas Manufacturing	Upstream Chemical Products
Other Basic Inorganic Chemical Manufacturing	Upstream Chemical Products
Ethyl Alcohol Manufacturing	Upstream Chemical Products
Cyclic Crude, Intermediate, and Gum and Wood Chemical Manufacturing	Upstream Chemical Products
All Other Basic Organic Chemical Manufacturing	Upstream Chemical Products
Synthetic Rubber Manufacturing	Upstream Chemical Products
Phosphatic Fertilizer Manufacturing	Upstream Chemical Products
Pesticide and Other Agricultural Chemical Manufacturing	Upstream Chemical Products
Iron and Steel Mills and Ferroalloy Manufacturing	Upstream Metal Manufacturing
Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	Upstream Metal Manufacturing
Rolled Steel Shape Manufacturing	Upstream Metal Manufacturing
Steel Wire Drawing	Upstream Metal Manufacturing
Alumina Refining and Primary Aluminum Production	Upstream Metal Manufacturing

Secondary Smelting and Alloying of Aluminum	Upstream Metal Manufacturing
Aluminum Sheet, Plate, and Foil Manufacturing	Upstream Metal Manufacturing
Other Aluminum Rolling, Drawing, and Extruding	Upstream Metal Manufacturing
Nonferrous Metal (except Aluminum) Smelting and Refining	Upstream Metal Manufacturing
Copper Rolling, Drawing, Extruding, and Alloying	Upstream Metal Manufacturing
Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding	Upstream Metal Manufacturing
Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)	Upstream Metal Manufacturing
Iron and Steel Forging	Upstream Metal Manufacturing
Nonferrous Forging	Upstream Metal Manufacturing
Powder Metallurgy Part Manufacturing	Upstream Metal Manufacturing
Metal Crown, Closure, and Other Metal Stamping (except Automotive)	Upstream Metal Manufacturing
Spring Manufacturing	Upstream Metal Manufacturing
Other Fabricated Wire Product Manufacturing	Upstream Metal Manufacturing
Motion Picture and Video Production	Video Production and Distribution
Motion Picture and Video Distribution	Video Production and Distribution
Drive-In Motion Picture Theaters	Video Production and Distribution
Teleproduction and Other Postproduction Services	Video Production and Distribution

Other Motion Picture and Video Industries	Video Production and Distribution
Tire Manufacturing (except Retreading)	Vulcanized and Fired Materials
Tire Retreading	Vulcanized and Fired Materials
Rubber and Plastics Hoses and Belting Manufacturing	Vulcanized and Fired Materials
Rubber Product Manufacturing for Mechanical Use	Vulcanized and Fired Materials
All Other Rubber Product Manufacturing	Vulcanized and Fired Materials
Pottery, Ceramics, and Plumbing Fixture Manufacturing	Vulcanized and Fired Materials
Clay Building Material and Refractories Manufacturing	Vulcanized and Fired Materials
Flat Glass Manufacturing	Vulcanized and Fired Materials
Other Pressed and Blown Glass and Glassware Manufacturing	Vulcanized and Fired Materials
Glass Product Manufacturing Made of Purchased Glass	Vulcanized and Fired Materials
Ground or Treated Mineral and Earth Manufacturing	Vulcanized and Fired Materials
Ship Building and Repairing	Water Transportation
Boat Building	Water Transportation
Deep Sea Freight Transportation	Water Transportation
Deep Sea Passenger Transportation	Water Transportation
Coastal and Great Lakes Freight Transportation	Water Transportation
Coastal and Great Lakes Passenger Transportation	Water Transportation
Inland Water Freight Transportation	Water Transportation
Inland Water Passenger Transportation	Water Transportation

Port and Harbor Operations	Water Transportation
Marine Cargo Handling	Water Transportation
Navigational Services to Shipping	Water Transportation
Other Support Activities for Water Transportation	Water Transportation
Sawmills	Wood Products
Wood Preservation	Wood Products
Hardwood Veneer and Plywood Manufacturing	Wood Products
Softwood Veneer and Plywood Manufacturing	Wood Products
Engineered Wood Member (except Truss) Manufacturing	Wood Products
Truss Manufacturing	Wood Products
Reconstituted Wood Product Manufacturing	Wood Products
Wood Window and Door Manufacturing	Wood Products
Cut Stock, Resawing Lumber, and Planing	Wood Products
Other Millwork (including Flooring)	Wood Products
Wood Container and Pallet Manufacturing	Wood Products
Prefabricated Wood Building Manufacturing	Wood Products
All Other Miscellaneous Wood Product Manufacturing	Wood Products

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