

# State of North Carolina Economic Overview



NORTH CAROLINA  
**DEPARTMENT of  
COMMERCE**

# State of North Carolina Economic Overview

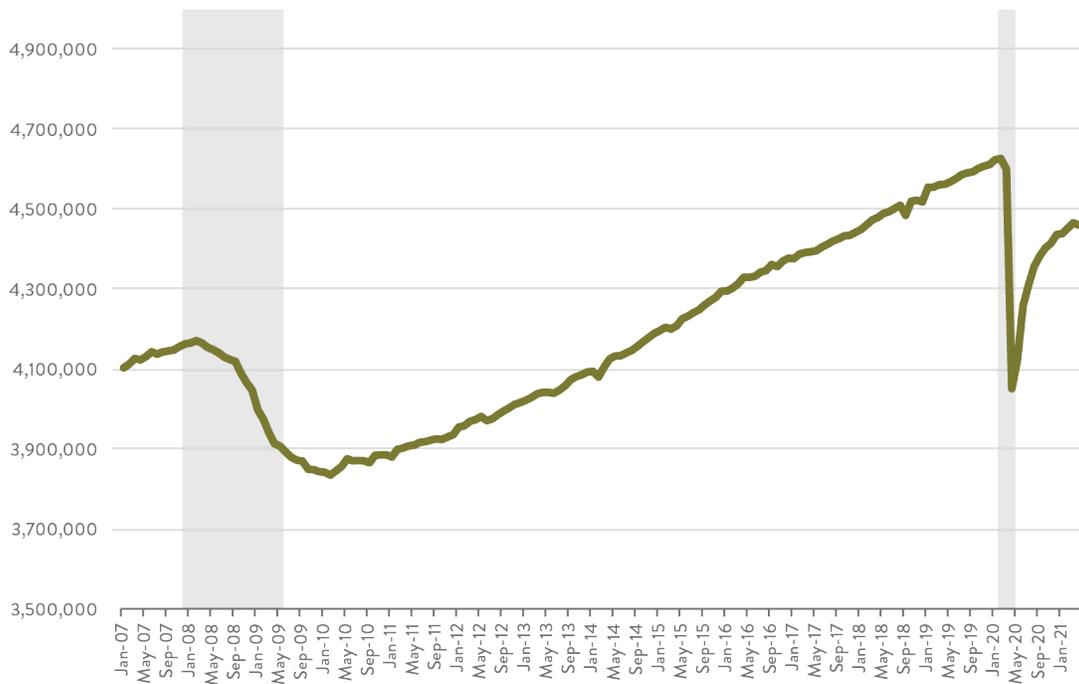
## *Update on North Carolina's Current Recovery*

**The “State of North Carolina Economic Overview” was completed in February 2020 to accompany the new Economic Development Strategic Plan. The Overview illustrated the salient long-term trends impacting North Carolina’s economy and informing the development of the plan’s strategies and tactics. However, the Covid-19 pandemic significantly disrupted most of these trends. This created or accentuated some challenges and opportunities; but for the most part, the stark economic shock appears to be temporary and most long-term trends are just as relevant now as they were before. This Update focuses specifically on the economic conditions that changed over the past year and are likely to impact North Carolina’s workforce, business, and community success, at least in the mid-term.**

## Employment

Like the rest of the nation, North Carolina experienced an unprecedented disruption to its labor market as a result of the COVID-19 pandemic. While many facets of the labor market have improved since the onset of the pandemic, the state has not fully recovered. The pandemic ended a decade of slow but steady job growth following the Great Recession with a precipitous drop of 12.4 percent between February and April 2020. Following this trough, the state experienced several months of rapid job growth – although recovery has slowed in recent months. Total nonfarm employment is currently 3.6 percent below the February 2020 peak.

**North Carolina Jobs Since 2007**  
*Current Employment Statistics, Seasonally Adjusted*



Source: NC Department of Commerce, LEAD CES, seasonally adjusted.

Most industries were immediately impacted at the onset of the pandemic. Several of these have bounced back fairly rapidly and have grown beyond their pre-pandemic employment peak. Transportation, Warehousing, and Utilities jobs, for instance, were up 9.6 percent between February 2020 and April 2021. Others, however, were quite drastically harmed and employment remains significantly smaller than it was before. Leisure and Hospitality jobs were down 15.5 percent, or 80,900 jobs over the same timeframe.

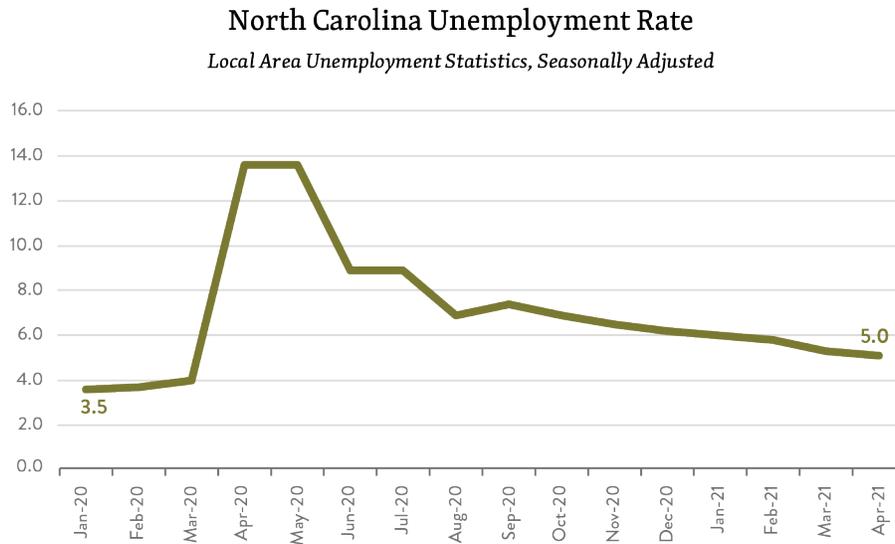
## Net Job Change by Industry

Industry	February 2020	April 2021*	Change	% Change
<b>Trade, Transportation &amp; Utilities</b>	<b>856,400</b>	<b>864,000</b>	<b>7,600</b>	<b>0.9%</b>
Wholesale Trade	188,200	182,400	-5,800	-3.1%
Retail Trade	502,300	499,800	-2,500	-0.5%
Transportation & Warehousing and Utilities	165,900	181,800	15,900	9.6%
<b>Government</b>	<b>738,200</b>	<b>696,600</b>	<b>-41,600</b>	<b>-5.6%</b>
Federal	75,000	75,800	800	1.1%
State Government	206,300	187,700	-18,600	-9.0%
Local Government	456,900	433,100	-23,800	-5.2%
<b>Professional &amp; Business Services</b>	<b>657,300</b>	<b>660,400</b>	<b>3,100</b>	<b>0.5%</b>
Professional & Technical Services	269,000	277,700	8,700	3.2%
Management of Companies & Enterprises	85,200	82,100	-3,100	-3.6%
Administrative & Waste Services	303,100	300,600	-2,500	-0.8%
<b>Education &amp; Health Services</b>	<b>632,200</b>	<b>600,200</b>	<b>-32,000</b>	<b>-5.1%</b>
Educational Services	98,900	85,900	-13,000	-13.1%
Health Care & Social Assistance	533,300	514,300	-19,000	-3.6%
<b>Leisure &amp; Hospitality</b>	<b>522,400</b>	<b>441,500</b>	<b>-80,900</b>	<b>-15.5%</b>
Arts, Entertainment & Recreation	77,200	60,900	-16,300	-21.1%
Accommodation & Food Services	445,200	380,600	-64,600	-14.5%
<b>Manufacturing</b>	<b>474,900</b>	<b>462,900</b>	<b>-12,000</b>	<b>-2.5%</b>
Durable Goods	257,400	247,500	-9,900	-3.8%
Nondurable Goods	217,500	215,400	-2,100	-1.0%
<b>Financial Activities</b>	<b>257,900</b>	<b>257,800</b>	<b>-100</b>	<b>0.0%</b>
Finance & Insurance	195,300	197,500	2,200	1.1%
Real Estate, Rental & Leasing	62,600	60,300	-2,300	-3.7%
<b>Construction</b>	<b>235,800</b>	<b>236,600</b>	<b>800</b>	<b>0.3%</b>
<b>Other Services</b>	<b>169,500</b>	<b>157,000</b>	<b>-12,500</b>	<b>-7.4%</b>
<b>Information</b>	<b>76,200</b>	<b>77,200</b>	<b>1,000</b>	<b>1.3%</b>
<b>Mining &amp; Logging</b>	<b>5,800</b>	<b>5,600</b>	<b>-200</b>	<b>-3.4%</b>
<b>TOTAL (Nonfarm)</b>	<b>4,626,600</b>	<b>4,459,800</b>	<b>-166,800</b>	<b>-3.6%</b>
<b>TOTAL (Private)</b>	<b>3,888,400</b>	<b>3,763,200</b>	<b>-125,200</b>	<b>-3.2%</b>

Source: NC Department of Commerce, LEAD CES, seasonally adjusted. April estimates are preliminary and subject to revision.

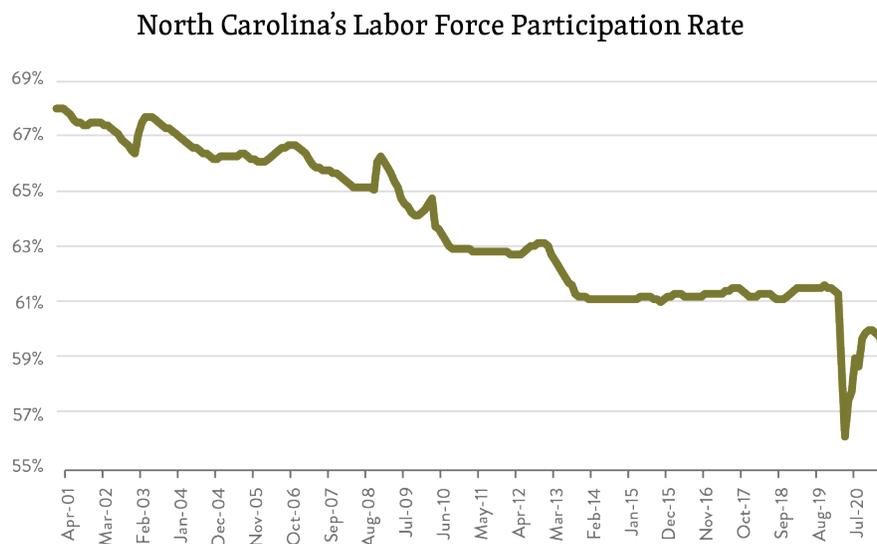
## Labor Force

North Carolina began 2020 with an unemployment rate of 3.5 percent, which jumped to 13.5 in April and May of 2020, followed by a decline to the latest level of 5.0 percent in April of 2021. In April, over 250,000 individuals were unemployed across the state.

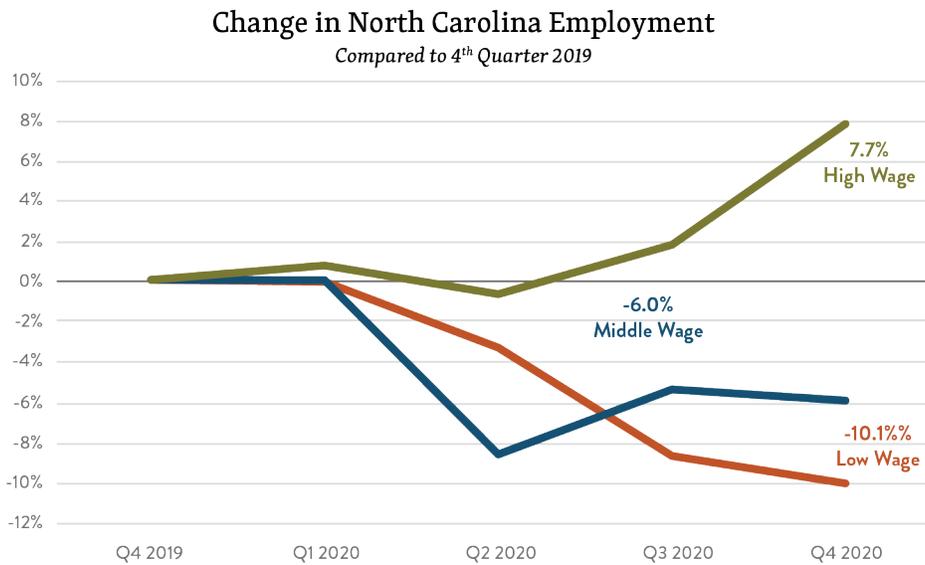


Source: NC Department of Commerce, LEAD LAUS, seasonally adjusted.

Labor force participation rates also fell over the past year – from above 61 percent in early 2020 to a low of 56.2 percent in April 2020, followed by a partial recovery to 59.4 in April of 2021. The employment to population ratio followed a similar pattern, falling from above 59 percent in early 2020 to a low of 48.6 percent in April of 2020 and rising to 56.4 in April of 2021. When comparing April 2021 to February 2020, the state has 159,667 fewer employed people and 67,371 more unemployed people, resulting in a labor force that is smaller by 92,296 individuals. While the declining rate of labor force participation is a concern and accelerated during the heights of the pandemic, North Carolina’s decline in participation long preceded 2020.



While the state’s economic conditions have improved considerably since the spring of 2020 at the aggregate level, the recovery has not been equitable. For example, White non-Hispanic employment has returned to its February 2020 level, while Black non-Hispanic employment is down more than 10 percent from February 2020.<sup>1</sup> Furthermore, low-wage and middle wage employment declined over 2020, while high-wage employment grew. While the growth of high-wage employment is definitely good for the state’s economy, the growth in high-paying employment didn’t make up for the loss of lower-paying employment. For the most part, individuals earning high wages prior to the pandemic (those in the upper third of the state’s wage distribution in 2019) experienced only a small decrease in employment over 2020. However, those with low-wage and middle-wage employment pre-pandemic were significantly less likely be employed in North Carolina in the 4<sup>th</sup> quarter of 2020.<sup>2</sup>



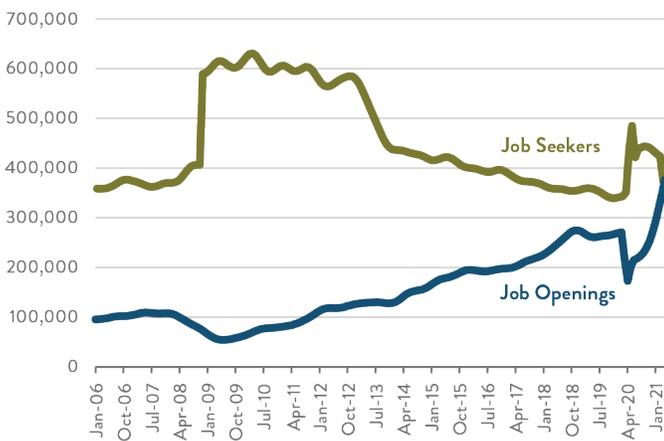
Source: NC Department of Commerce, LEAD. Analysis of NC Common Follow-Up System (CFS data). Seasonally adjusted

<sup>1</sup> Analysis of Current Population Survey, NC Commerce, Labor and Economic Analysis Division.  
<sup>2</sup> Analysis of Common Follow-Up System, NC Commerce, Labor and Economic Analysis Division.

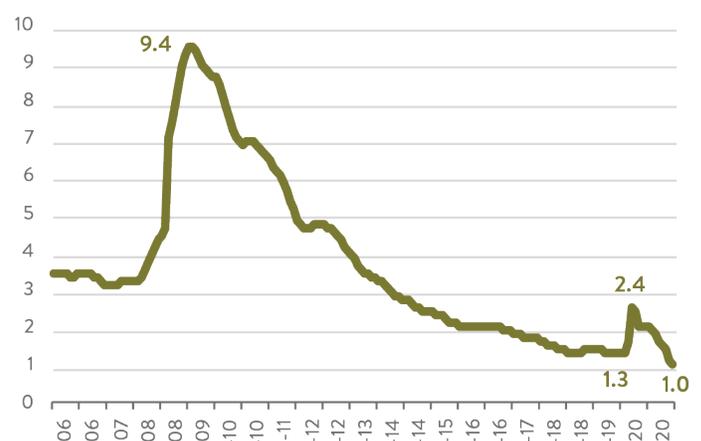
## Labor Supply and Demand

While jobs, overall, have not recovered, the number of job openings (available positions) has accelerated more rapidly and as of April 2021 exceeds the number of openings prior to the pandemic. Meanwhile, the number of North Carolina jobseekers, while declining as people move from unemployed to employed, remains highly elevated and presents a good source of potential applicants for employers. However, the ratio of jobseekers to job postings as of April 2021 was even lower than its pre-pandemic level. Employers throughout the state once again face conditions of a tight labor market with only one jobseeker per opening.<sup>3</sup> As workers feel better about the pandemic, schools and daycares fully reopen (allowing parents to get back to work), and the unemployed become more anxious about the personal economic conditions North Carolina should see an increase in jobseekers. However, as the long-term trend reveals our state, and the nation, are challenged with drawing more people into labor force ease employers' hiring difficulties. This creates opportunities for those who have historically had higher rates of unemployment such as the formerly incarcerated, those with disabilities, the long-term unemployed, lower-educated individuals, youth, and some minority populations.

North Carolina Job Seekers & Job Openings



North Carolina Ratio of Jobseekers to Job Opening



Source: NC Department of Commerce, LEAD analysis of data from the US Bureau of Labor Statistics and the Conference Board, seasonally adjusted and smoothed.

As the pandemic recedes, there is still uncertainty about the pace of recovery and whether some aspects of the pandemic economy will endure. The economy is predicted to grow over the near and mid-term as businesses fully reopen and respond to consumers' pent-up demand.<sup>4</sup> In the near term, the tight labor market as well as bottlenecks in numerous supply chains may limit this growth. However, several key features of the pre-pandemic economy still hold.

<sup>3</sup> Analysis of Labor Supply/Demand, NC Commerce, Labor and Economic Analysis Division.

<sup>4</sup> A recent summary of recovery trends is found in ["The Economic Recovery Is Here. It's Unlike Anything You've Seen."](#) Wall Street Journal, June 2<sup>nd</sup>.

## Talent is Still Key

The need for businesses to attract and retain talent is as important as it has ever been. Although it may be difficult to remember after the events of the past year, many businesses struggled to find workers prior to the pandemic, particularly in certain industries and occupations.<sup>5</sup> The disruptions to the labor market created by the pandemic included a distinction between jobs that could be done remotely versus essential, frontline jobs that could not; a disruption to in-person schooling and childcare arrangements; and differential impacts to various industries, particularly those dependent on physical proximity of customers and workers such as leisure and hospitality. Even as these disruptions are eased, there will still be intense competition for workers on the part of employers.

A great deal of the labor market tightness experienced by the state and nation is attributable to long-term structural characteristics such as the aging of the workforce coupled with low fertility rates and limited immigration of new workers.<sup>6</sup> These basic demographic realities mean employers may have to increase offered wages and benefits and seek to reengage workers who have left the labor force as well as engage potential workers with barriers to employment such as criminal records, housing or transportation issues.

Working arrangements may also change as a result of the pandemic and the need to attract more workers, including the use of remote and hybrid work arrangements. Although many jobs are difficult or impossible to be done remotely, many companies and workers underwent a radical experiment with remote work over the past year. These experiments may lead to an overall increase in remote and hybrid work for those companies who did not experience a loss of productivity and for those workers who may prefer the flexibility and other benefits associated with remote work. Although remote work is dependent on technology and broadband infrastructure that is not universally available or affordable, this trend could shift where companies as well as workers choose to locate and how they operate, with implications for commuting, housing, and consumption patterns.

Another response to tight labor markets on the part of employers is automation – such as replacing or supplementing human labor through technology. Although automation has occurred in industries such as manufacturing for decade, the advent of artificial intelligence, automated delivery and the increase of e-commerce may result in automation reaching greater parts of the workforce. A 2020 survey of global senior executives by McKinsey found that two-thirds said they were stepping up investment in automation and AI either somewhat or significantly.<sup>7</sup> Due to automation and other changes associated with the pandemic, McKinsey estimates that over 10 percent of the US workforce may need to transition to new occupations by 2030, an increase over their pre-pandemic estimate of 8 percent.<sup>8</sup> Increases in automation do not necessarily result in the simple replacement of existing workers, but rather a transformation of the types of occupations and skills required to work alongside new technology. Workers may need to obtain new skills and credentials to benefit from these changes, and employers also have an interest in developing their existing workforce to take advantage of new opportunities and increased productivity.

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<sup>5</sup> *The 2020 Employer Needs Survey*, collected during Fall of 2019, indicated 56 percent of employers had difficulty hiring in the previous year.

<sup>6</sup> For a global perspective on this issue, see *“Long Slide Looms for World Population, With Sweeping Ramifications.”* *New York Times*, May 24th.

<sup>7</sup> McKinsey, *“The Future Of Work after COVID-19.”* 2021.

<sup>8</sup> *Ibid.*

The pandemic has also seen a somewhat **surprising increase in business formation**, as measured by new business licensing at the state and national level. This jump in activity has been interpreted as a positive countertrend to the long-term decline in new business formation. However, academic researchers have also questioned whether these new businesses would go on to employ large numbers of workers.<sup>9</sup> The disruptions to many businesses and changes in consumption patterns (such as an increase in e-commerce) during the pandemic does provide an opportunity for new businesses to emerge to replace previous ones. The success of these new enterprises will be dependent on their ability to attract and retain talent as they grow.

Finally, the pandemic has illuminated many interconnected aspects of the economy, including public health concerns, the social safety net, and the relationship between employers and workers. In order to have a thriving economy, workers need to be physically safe, adequately compensated, and have access to supports like childcare, housing, transportation, and technology infrastructure. Businesses have also realized that while strong demand for their products exists, an adequate workforce is needed to meet this demand. In order to fully recover from the impacts of the pandemic, a more holistic approach to meeting these needs is required, and this Strategic Economic Development Plan seeks to create the conditions for success.

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<sup>9</sup> Ermin Dinlersoz, Timothy Dunne, John Haltiwanger, and Veronika Penciakova. *“Business Formation: A Tale of Two Recessions.”* Federal Reserve Bank of Atlanta, January 2021.

# State of North Carolina Economic Overview

*Data & Trends Preceding  
the COVID-19 Pandemic*



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**DEPARTMENT of**  
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# INTRODUCTION

In many ways, North Carolina today is a large, enviable economy. Among the attributes that distinguish us from our peers are our solid population and job growth; thriving, globally-competitive industry sectors; advantageous business climate; and strong infrastructure for economic development – including world-class higher education institutions. In the arena of economic development, the state regularly competes for and wins business recruitment projects against bigger states such as Texas, California, and New York, and beyond. Within the state, the two largest metro regions, Charlotte and the Triangle, compete for knowledge-based companies and workers against similar cities such as Austin, Boston, and the Silicon Valley. The state’s rural areas have rich manufacturing legacies in products such as textiles, furniture, and tobacco, which continue to be concentrated in the state despite radical global transformations of these industries. Advanced manufacturing in industries such as aerospace and automotive parts, biotechnology, and pharmaceuticals have also become significant industries in recent decades. Agriculture and Defense industries also continue to be large, vital components of the state’s economy.

Despite these strengths, North Carolina, like many other states and countries, faces a set of challenges which must be recognized. These include:

- Recognizing the changing structure of the economy — in particular the increased importance of services over goods
- Disparities and inequality within the state — within metros, among metros, and between urban and rural areas
- Addressing the persistence of low wages and income, particularly compared to the US
- Developing a skilled workforce for current and future needs, despite demographic changes, changing skill needs, and the implications of automation and artificial intelligence
- Adapting to an interconnected global economy being transformed by climate change, pandemics, and changing patterns of international trade

A thorough understanding of North Carolina’s economy is critical to forming an economic development strategy that seizes on our many opportunities for sustainable future success, mitigates existing threats, and ensures that all have the opportunity to thrive. This document serves to provide an economic overview of North Carolina and provide a common baseline for developing new goals, strategies, and tactics for the state’s Comprehensive Strategic Economic Development Plan. While not necessarily a comprehensive look at every aspect of the state’s economy, this seeks to point out several trends influencing the state’s recent economic performance and future possibilities. Many of these trends are not unique to the state—they are national or even global in character. Nonetheless, it is necessary to point them out in order to identify fruitful approaches to solving the state’s challenges.

## STATE OVERVIEW

North Carolina has the 9<sup>th</sup> largest state population with nearly 10.5 million people. It encompasses an area of almost 54,000 square miles ranging from the Blue Ridge Mountains to the Atlantic Ocean, and had a GDP of over \$563 billion in 2018, an economy slightly larger than Sweden’s.<sup>1</sup> Over the previous century, the state has transformed from an agricultural state with a manufacturing base in tobacco, textiles, and furniture to an economy with strengths in finance, biotechnology, advanced manufacturing, and the knowledge economy. Throughout this transformation, the North Carolina economy has in many ways become more like the U.S. economy, while maintaining some key distinctions.

North Carolina has benefitted from Sunbelt migration, particularly during the 1990’s and 2000’s, which helped develop metro areas in Charlotte, Raleigh, and the Piedmont Triad, and the smaller but fast-growing metros of Asheville and Wilmington. The growth of these cities came from new arrivals from other states as well as from international immigration. Nevertheless, North Carolina has the second-largest rural population of any state, with 34% of the state’s residents living in rural areas.<sup>2</sup> However, the rural population has not benefitted to the same extent from the transformation of the state and its economy. Out-of-county commuting has increased, with only 14 out of 100 counties having more than 50% of their workers living and working in the same county as of 2017, down from 47 counties in 2002.<sup>3</sup>

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<sup>1</sup> U.S. Census Bureau, Bureau of Economic Analysis, International Monetary Fund.

<sup>2</sup> U.S. Census Bureau, 2010 Census.

<sup>3</sup> U.S. Census Bureau, Longitudinal-Employer Household Dynamics Program.

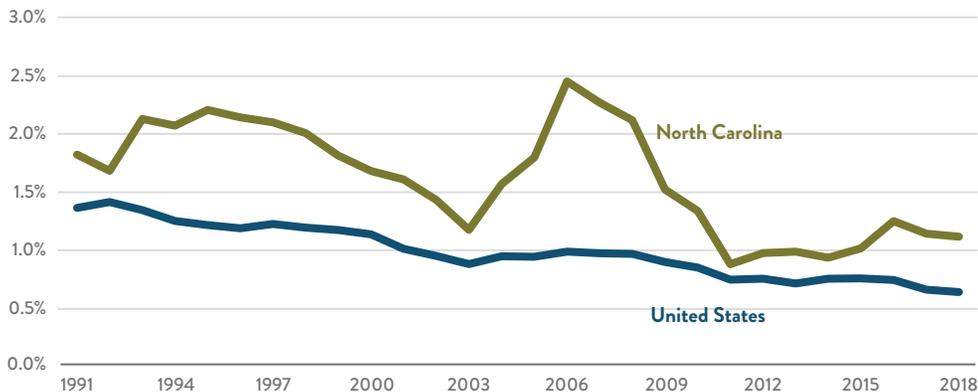
Like the U.S. and other developed nations, North Carolina’s population faces larger structural challenges, including a slowing population growth rate, an aging workforce, and issues of inequality and regional disparities. Like the U.S., the state has become less homogenous, with prosperous urban areas (characterized by knowledge-intensive service industries) and less prosperous rural areas still reflective of manufacturing’s legacy. In addition, North Carolina is also experiencing structural changes to the economy due to technological advancements, global trade and interdependence, and the slowing of economic growth, new business formation and productivity.

Furthermore, North Carolina’s economy, while expanding, must be viewed in the context of the Great Recession and the slow recovery that followed, which accelerated existing structural changes already underway. Following a peak in late 2007, North Carolina’s number of jobs fell by 400,000 (almost 10%) and it took seven years to return to pre-recession levels.<sup>4</sup> In 2017, as the state finally moved beyond the impacts of the Great Recession, North Carolina surpassed the national jobs recovery. By 2018, the state had 8.5% more jobs than during its 2007 peak, while the nation had 8.0% more.<sup>5</sup>

## A Growing State

Looking back over the past several decades, the state’s population growth has been consistently higher than national growth. North Carolina’s annual growth rate peaked at 2.4% prior to the Great Recession, followed by slowing growth rates, which leveled out at about 1% from 2011 to 2015. The state has experienced a slight uptick in growth over the past three years, diverging from the mostly flat and declining U.S. annual rates.

**Figure 01: North Carolina Population Growth Outpacing the Nation**  
Annual year-over-year population rates



Source: U.S. Census Bureau, Population Estimates.

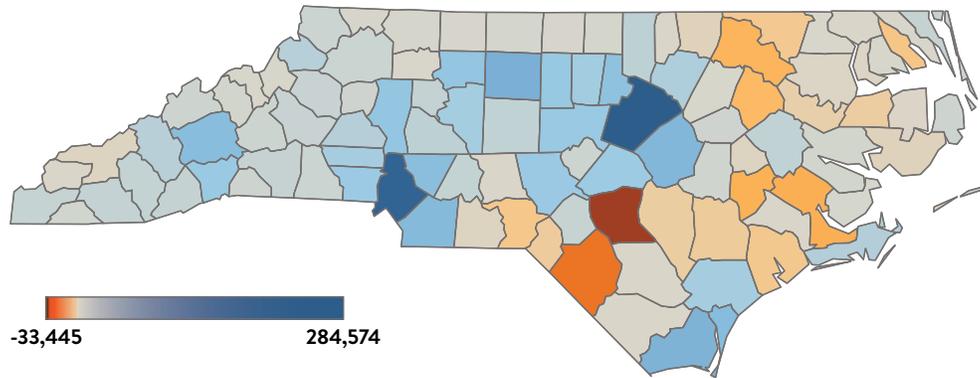
From 2017 to 2018, the combined populations of Mecklenburg and Wake Counties grew by more than 37,000 people, accounting for about 33% of the state’s net population increase. The Charlotte, Raleigh, and Durham Metropolitan Statistical Areas (MSAs) accounted for 63% of the state’s total growth between 2017 and 2018. Nevertheless, many North Carolinians still live in rural areas. As of 2010, 34% of the state’s residents lived in rural Census tracts, giving North Carolina the second largest rural population in the country.<sup>6</sup>

The composition of the state’s population growth has been changing over time. In 2018, net migration accounted for more than three of every four new residents to the state, while natural growth declined to the lowest level since 1970. In contrast, net migration accounted for 48% of the nation’s new residents in 2018. The aging of the state’s population as well as lower fertility rates have contributed to this gradual decline in natural increase. In 2010, 13% of the state’s population was 65 or older. By 2018, the 65+ age group had increased to 16% of the total population, matching the U.S. proportion. This age group is projected to reach 19% of the state’s population by 2028.<sup>7</sup>

<sup>4</sup> North Carolina Department of Commerce, QCEW.  
<sup>5</sup> Ibid.

<sup>6</sup> U.S. Census Bureau, 2010 Census.  
<sup>7</sup> North Carolina Office of State Budget and Management.

**Figure 02: Projected Migration by County, 2010 to 2030**

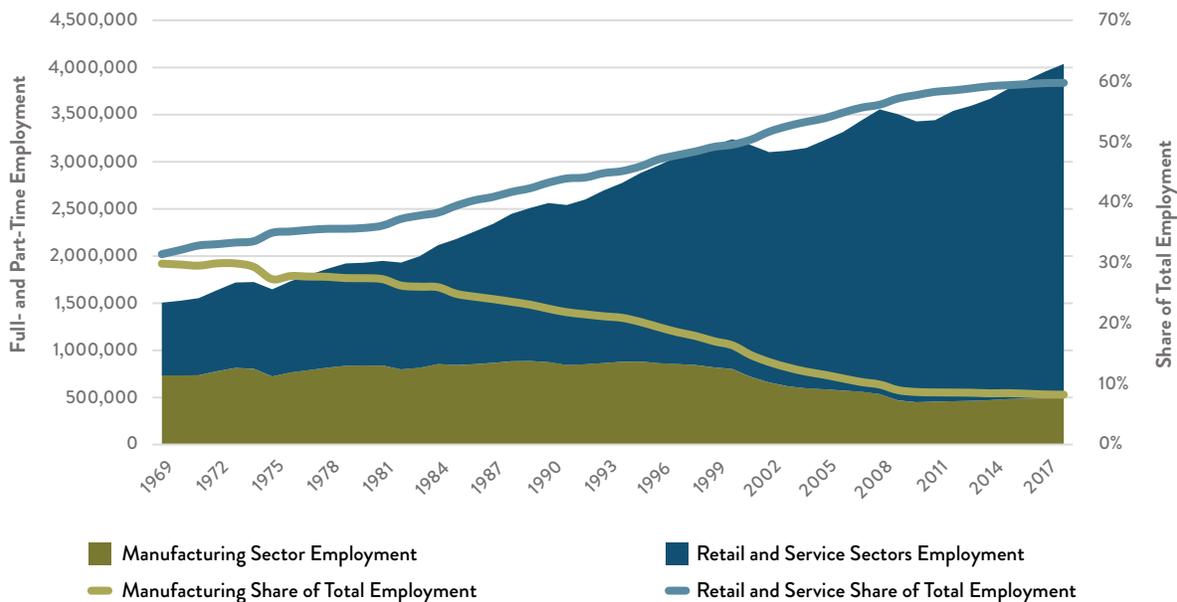


**Figure 02: Projected Migration by County, 2010 to 2030.** Over the twenty-year period, population gains are projected to be concentrated in the Triangle and Charlotte regions, while eastern North Carolina is expected to experience continued population loss. Data provided by the North Carolina Office of State Management and Budget, State Demographer Population Projections; U.S. Census Bureau, Migration and Geographic Mobility.

## A Changing Economy

North Carolina’s economy, like that of the entire U.S., has been transitioning from a Goods-Producing (including manufacturing and construction) to a Service-Providing economy over the past several decades. Since 1970, the manufacturing sector share of the state’s total employment declined from 30% to 8%, while aggregate manufacturing employment dropped from a peak of roughly 900,000 jobs in the mid-1990s to 500,000 in 2018. Meanwhile, employment in retail and consumer and business service sectors rose steadily and currently accounts for roughly 60% of the state’s total employment. As discussed in more detail below, this long-term transition made meaningful impacts on the state’s economic development, growing wealth among those individuals, firms, and cities engaged in highly productive service activities, while deteriorating middle-income opportunities for many communities throughout the state.

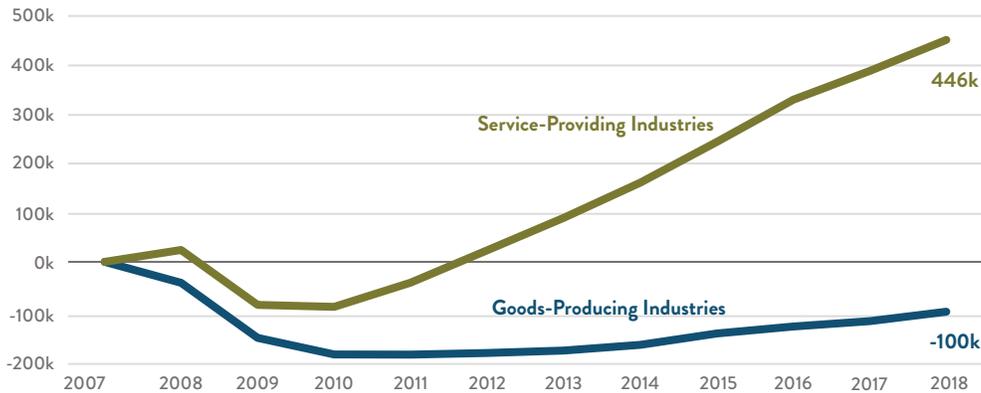
**Figure 03: Manufacturing and Service Sector Employment, 1969 to 2018**



**Figure 03: Manufacturing and Service Employment, 1968 to 2018.** Where manufacturing employment once represented nearly one-third of North Carolina’s total employment, the figure has decreased to 8% in 2018. This occurred as consumer and business service-oriented employment grew significantly, from roughly 30% of all employment in 1969 to 60% in 2018. Despite long-term declining share, total manufacturing employment did not significantly decline until the late 1990s. Data provided from the Bureau of Economic Analysis (SAEMP25) and aggregated by analyst. SIC system utilized from 1969 to 2000; NAICS system utilized from 2001 to 2018.

Since 2007, Service-Providing industries have grown, while Goods-Producing industries have not recovered to their pre-recession levels. From 2017 to 2018, Service-Providers made up 77% of the state’s net new jobs.

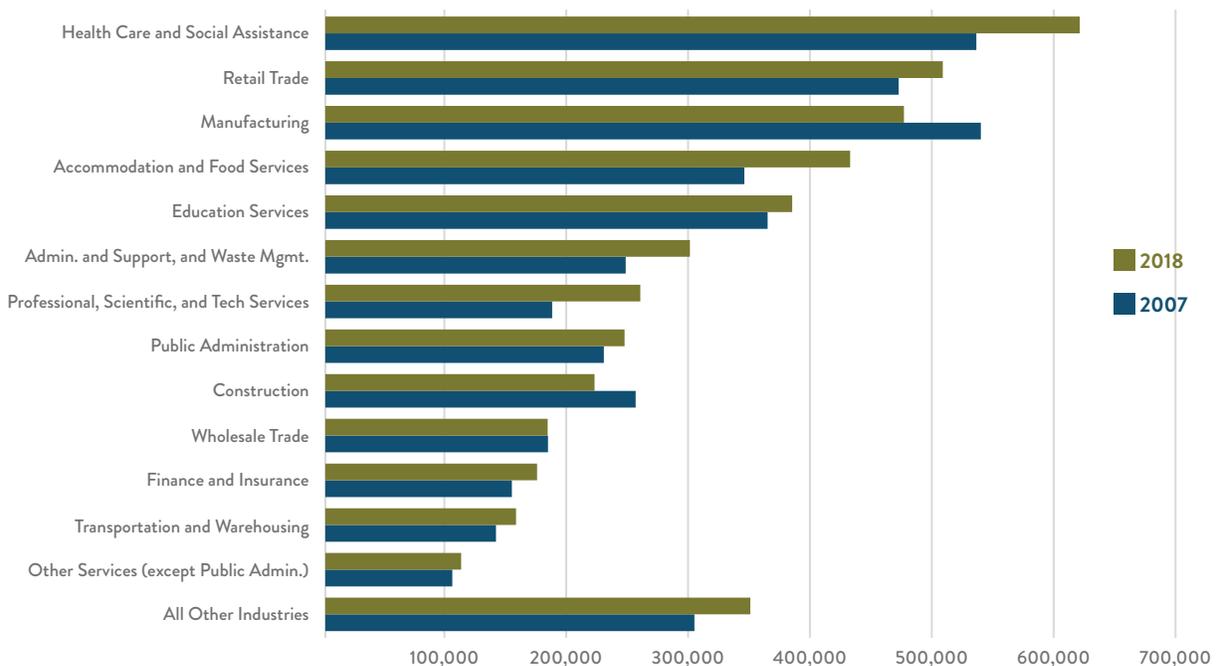
**Figure 04: North Carolina’s Transition to a Service-Providing Economy**  
*Change in average annual jobs compared to 2007, by domain*



Source: NC Department of Commerce, QCEW.

North Carolina’s industrial mix shows the importance of Service-Providing industries, although Manufacturing still ranks third by size of employment. In 2018, the largest sector by employment was Health Care and Social Assistance, followed by Retail Trade, Manufacturing, Accommodation and Food Services, and Educational Services. The shift from goods to services can be seen in the large numbers of jobs gained since 2007 in Accommodation and Food Services (87,000), Health Care and Social Assistance (85,000), and Administrative and Support and Waste Management Services (53,000) at the same time that Manufacturing lost 63,000 jobs and Construction lost 34,000 jobs. The fastest-growing large industries since 2007 were Professional, Scientific and Technical Services (39%), Accommodation and Food Services (25%), Administrative and Support and Waste Management Services (21%), and Health Care and Social Assistance (16%).

**Figure 05: North Carolina Industry Jobs by 2-Digit NAICS Code, 2007 and 2018**

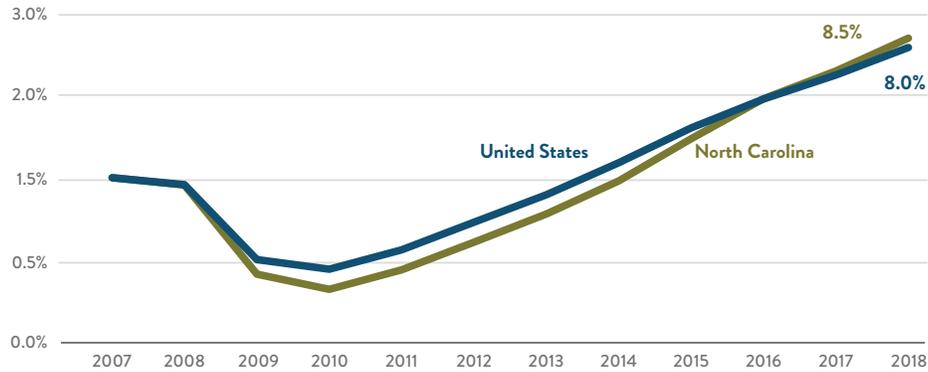


Source: NC Department of Commerce, QCEW.

## Job Growth and Regional Variation

Since the pre-recession peak in 2007, North Carolina's industry employment has grown by 8.5% while the U.S. had grown by 8.0%. During the recession, job losses in the state were greater (as a percentage) than the U.S., and the state's job recovery lagged the U.S. for most of the decade that followed. However, North Carolina's job recovery has slightly surpassed the nation since 2017.

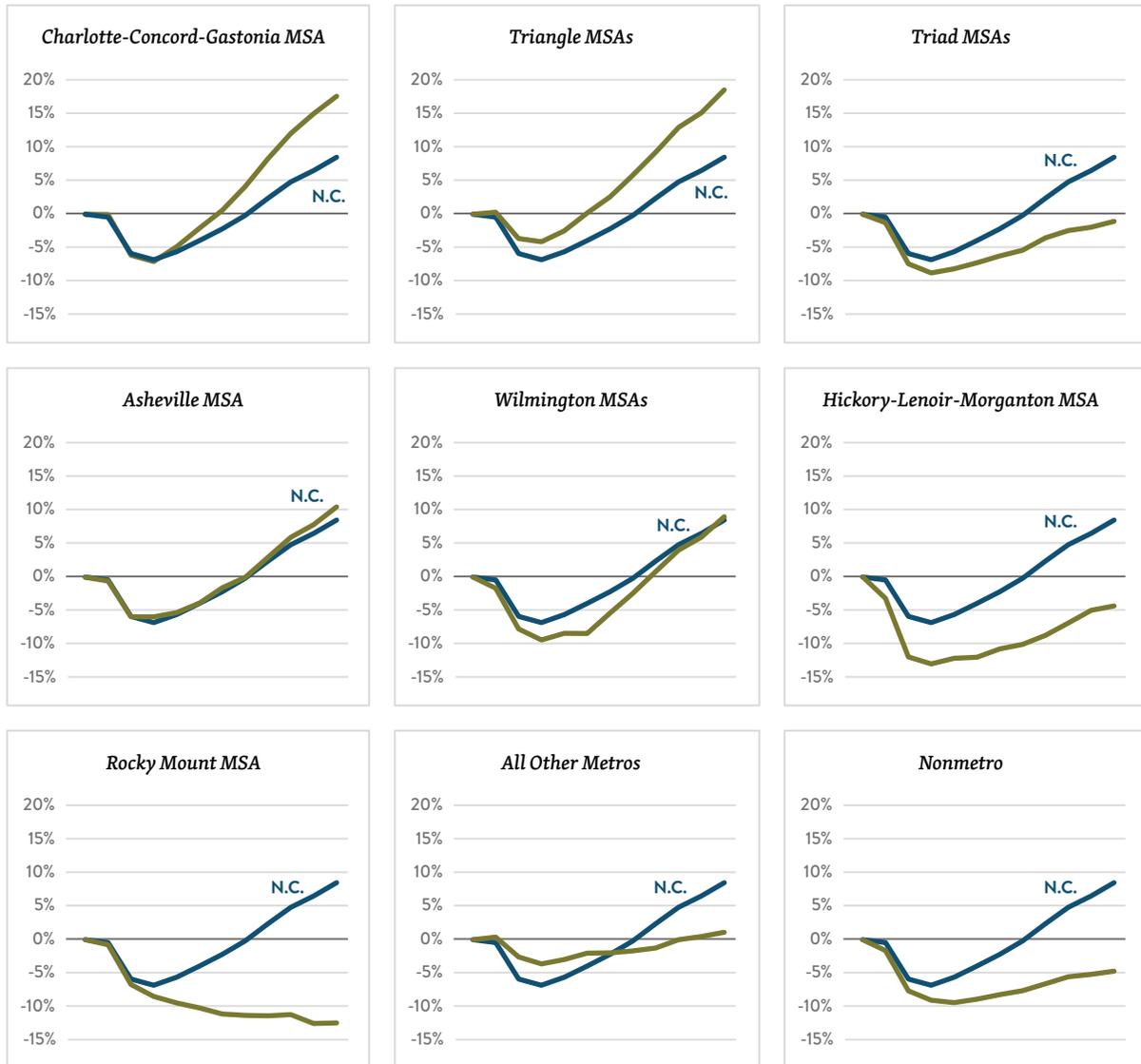
**Figure 06: Since Recession, North Carolina Job Growth has Surpassed the Nation**  
*Percent changed in average annual jobs compared to 2007*



Source: N.C. Data from the NC Department of Commerce, QCEW. U.S. Data from BLS, QCEW.

This rebound, however, was not universally experienced. North Carolina metropolitan areas did not add jobs at equal rates and this variation appears in the comparison below (Figure 5). The Charlotte and Triangle regions dramatically exceeded average rates of job creation. The Asheville and Wilmington metros performed slightly better than the state average, while other regions' economies stagnated or declined. Rural areas not part of a metro are still 4.7% below their 2007 jobs levels.

**Figure 07: Indexed Total Employment by Metropolitan Statistical Area (MSA) and North Carolina State Annual Averages, 2007 to 2018**

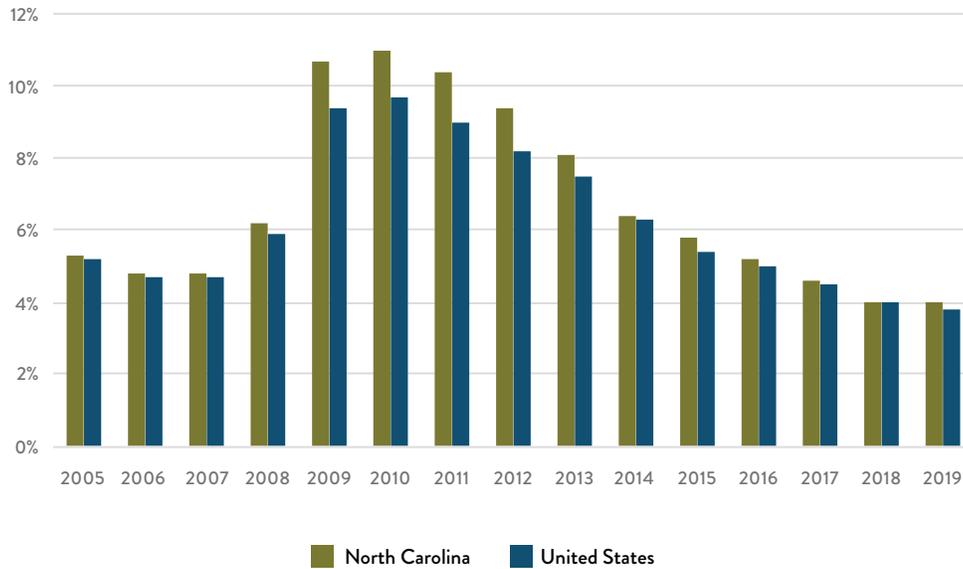


The dark line indicates the state's total employment change. Source: Quarterly Census of Employment and Wages (QCEW), NC Department of Commerce.

## Labor Market Trends

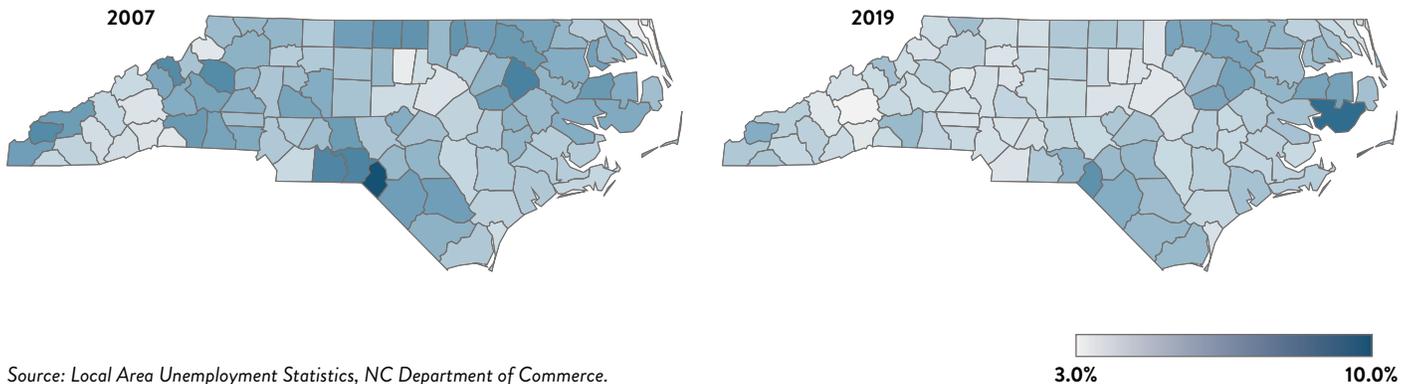
The impacts of the Great Recession in the state are visible in changes in unemployment (Figure 2), labor force participation, as well as total employment. Like the nation as a whole, the state experienced a sharp economic blow followed by a relatively slow recovery. Statewide unemployment peaked in 2010 at 11% – roughly 1.5 percentage points above the national average – and did not fully recover until 2016. Current estimates show the state outperforming pre-recession unemployment rates, with just 3.9% of the workforce considered unemployed.

**Figure 08: Unemployment Rate, 2005 to 2019**



**Figure 08: Unemployment Rate, 2005 to 2019.** State and national rates of unemployment peaked during 2010. The current rates fell below pre-recession levels. Data provided by the Bureau of Labor Statistics Local Area Unemployment Statistics.

**Figure 09: Unemployment Rates by County, 2007 and 2019 Averages**



Source: Local Area Unemployment Statistics, NC Department of Commerce.

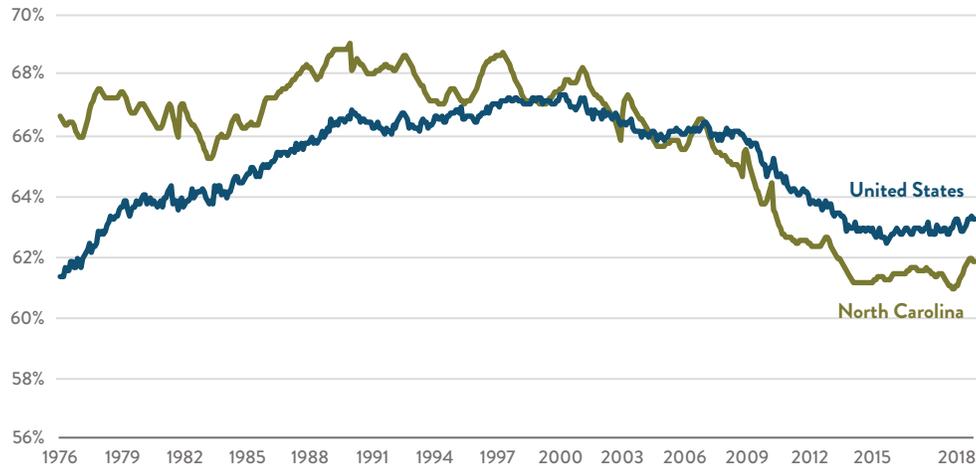
Relative to their 2007 annual averages, only 15 counties had higher unemployment rates in 2019, and 14 of these counties' rates were higher by 0.6 percent or less.

While the state's population has rapidly increased in recent years, labor force participation has fallen. Both in North Carolina and nationally, labor force participation rates (LFPR) have been on a downward trend for the past two decades. Defined by the Bureau of Labor Statistics, LFPR is portion of the civilian, non-institutionalized population aged 16 or above that is either employed or actively seeking employment. North Carolina's LFPR was only slightly below that of the nation prior to the Great Recession, but the state's rate has fallen farther than that of the U.S. since that time. North Carolina's annual LFPR was 4.4 percentage points lower in 2018 than in 2007, while the U.S. LFPR was 3.1 percentage points lower.<sup>8</sup> After several years of modest upward momentum, the state's annual LFPR declined from 61.5% in 2017 to 61.2% in 2018. The national LFPR remained level over during 2018 at 62.9%.

<sup>8</sup> NC Department of Commerce, LAUS

**Figure 10: North Carolina Labor Force Participation Below the Nation**

*Monthly labor force participation, seasonally adjusted*



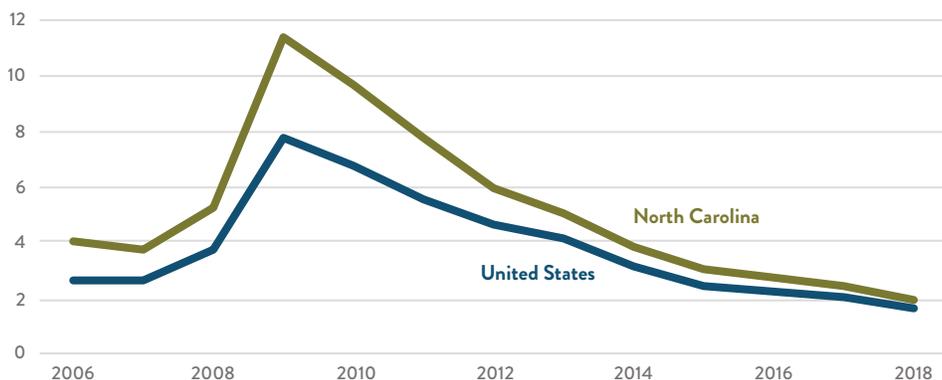
Source: NC Department of Commerce, LAUS

North Carolina, like the nation, has an aging population, which has pulled down the LFPR. In addition to this longer-term structural trend, changes in the business cycle and increased higher education enrollment can lower LFPRs. Previous research by LEAD has estimated that about half the decline in the state’s LFPR from 2000 to 2016 is attributable to an aging population.<sup>9</sup> This analysis suggested that, absent an aging population, North Carolina’s LFPR would have been 3.3 percentage points higher in 2016. National research suggests the opioid crisis may have also had a large impact on labor force participation, with one study estimating that rates of prescription opioids can account for 44 percent in prime age men’s labor force participation between 2001 and 2015.<sup>10</sup>

North Carolina currently has a tight labor market, creating opportunities for jobseekers but challenging employers looking to hire. A “tight” labor market means that the state has relatively few jobseekers per job opening. In other words, there is relatively little labor supply compared to the amount of labor demand. On average, there were about 365,000 jobseekers and nearly 200,000 job openings in 2018—a “supply/demand rate” of 1.9 jobseekers per job opening. This rate represents the tightest labor market since at least 2006 (the first year for which this data is available). For context, at its post-Great Recession peak, there were 11.3 jobseekers per job opening in North Carolina in 2009.

**Figure 11: Tightening State and National Labor Markets**

*Annual jobseekers per job opening rates*



Source: NC Department of Commerce, Labor Supply/Demand Analyzer

<sup>9</sup> Why Are Fewer North Carolinians Participating in the Labor Force?, NC Department of Commerce, LEAD Feed, <https://www.nccommerce.com/blog/2016/11/03/why-are-fewer-north-carolinians-participating-labor-force>

<sup>10</sup> Aliprantis, Dionissi, Kyle Fee, and Mark E. Schweitzer. 2019. “Opioids and the Labor Market.” Federal Reserve Bank of Cleveland, Working Paper no. 18-07R. <https://doi.org/10.26509/frbc-wp-201807r>.

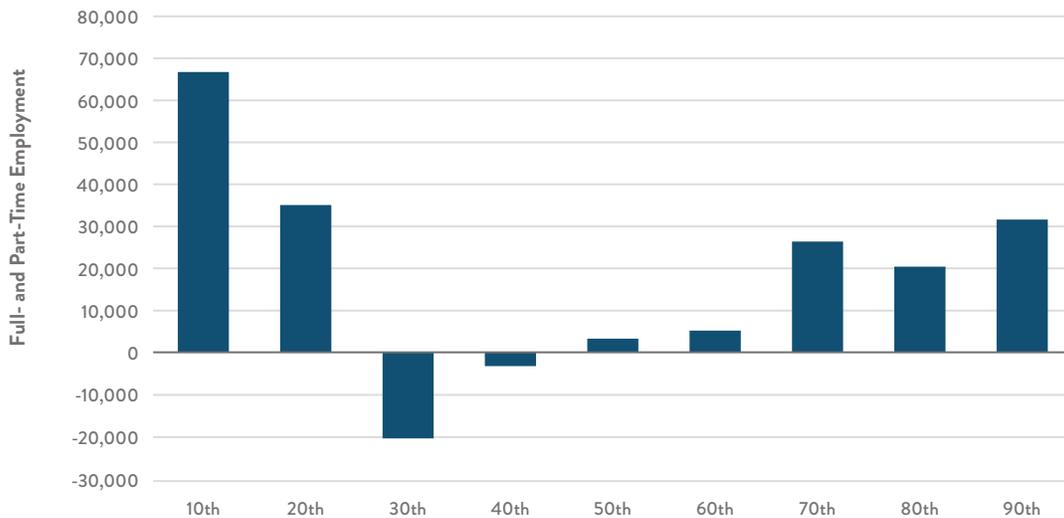
Since 2009, all eight of Prosperity Zones in the state have experienced tightening labor markets, but the degree of that tightness differs. In 2018, regional supply/demand rates ranged from 1.4 in the Southwest to 3.7 in the Southeast. With that said, each of the eight regions experienced its tightest labor market since 2006.

The persistence of tight labor markets, combined with the demographic realities of aging workers and declining fertility rates as well as restrictions on immigration into the country, means that the state will need to work harder to bring more workers into the labor force. For many employers, this may mean reaching out to populations such as disconnected youth, workers with criminal records and substance abuse issues, disabled workers, and unemployed veterans.

### Occupation Trends: The “Hollowed-Out” Middle

Another gauge of the uneven development in North Carolina’s economy is the quality of jobs, including wage growth across the occupational spectrum. From 2008 to 2018, industry shifts led to a bifurcated pattern of employment by occupation, with meaningful growth only in the upper and lower ends of the occupational wage distribution (Figure 9). Among the top ten fastest growing occupations since 2008, the vast majority (72%) of new jobs paid very low wages. Meanwhile, those occupations offering middle-income opportunities stagnated or declined.

**Figure 12: Employment Growth by Wage Decile, 2008 to 2018**



*Figure 12: Employment Growth by Wage Decile, 2008 to 2018. During the post-recession recovery, new job generation in North Carolina occurred primarily in the 20th decile and below and in the 70th wage decile and above. This bifurcated growth exacerbates income inequality. Data provided by the Bureau of Labor Statistics Occupational Employment Statistics.*

**Figure 13: Ten Fastest Growing Occupations, 2008 to 2018**

Occupation Title	2018 Total Employment	2018 Median Annual Salary	Employment Change Since 2008	Minimum Educational Requirements
Cashiers	126,460	\$19,330	25,760	None
Customer Service Representatives	94,420	\$32,910	24,210	High School
Office Clerks, General	82,630	\$30,230	20,240	High School
Sales Representatives, Services, All Other	33,230	\$50,430	19,780	High School
Cooks, Restaurant	47,350	\$23,630	18,510	None
Registered Nurses	102,500	\$62,940	18,270	Bachelor's
Computer Systems Analysts	26,110	\$90,230	10,540	Bachelor's
Stock Clerks and Order Fillers	62,050	\$24,750	10,130	High School
Medical Assistants	18,340	\$32,710	8,380	Postsecondary
Management Analysts	16,970	\$83,700	8,350	Bachelor's

*Figure 13: Ten Fastest Growing Occupations, 2008 to 2018. Bifurcation is also evident in growing real wages during recovery. The top ten occupations in terms of growth offer either high or low wages and are experiencing high or low wage growth. Those with higher wages require at least a bachelor's degree for entry. Data provided by the Bureau of Labor Statistics Occupational Employment Statistics and Occupational Requirements.*

Looking forward to projected growth, a similar pattern emerges, where most of the high-growth occupations with substantial employment pay less than \$40,000 or more than \$80,000 annually:

**Figure 14: High-Growth ( $\geq 20\%$ ) Occupations Projected by 2026**

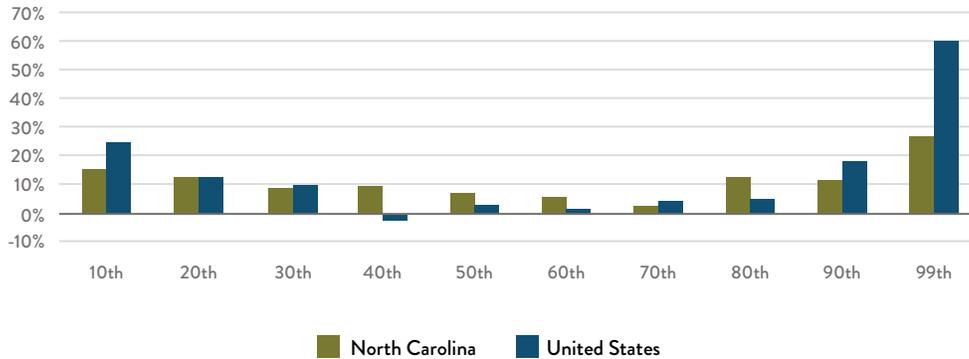
Occupational Title	Employment Estimate 2026	Net Change (from 2017)	Education	2018 Regional Median Annual Wage
Home Health Aides	46,148	11,885	High school diploma	\$20,390
Personal Care Aides	38,042	8,867	High school diploma	\$21,010
Nonfarm Animal Caretakers	9,942	1,944	High school diploma	\$22,070
Veterinary Assistants and Laboratory Animal Caretakers	4,022	672	High school diploma	\$28,200
Phlebotomists	7,179	1,227	Postsecondary	\$31,700
Medical Assistants	21,267	3,681	Postsecondary	\$32,710
Massage Therapists	6,207	1,104	Postsecondary	\$39,590
Respiratory Therapists	5,260	1,121	Associate's degree	\$56,410
Physical Therapist Assistants	3,495	648	Associate's degree	\$60,100
Market Research Analysts and Marketing Specialists	21,876	4,277	Bachelor's degree	\$62,370
Diagnostic Medical Sonographers	2,460	453	Associate's degree	\$66,930
Operations Research Analysts	3,245	682	Bachelor's degree	\$81,130
Physical Therapists	8,250	1,444	Doctoral or professional	\$86,600
Statisticians	1,884	494	Master's degree	\$96,290
Software Developers, Applications	36,309	8,782	Bachelor's degree	\$100,560
Nurse Practitioners	5,510	1,259	Master's degree	\$101,540
Physician Assistants	5,925	1,310	Master's degree	\$102,180
Information Security Analysts	5,275	1,167	Bachelor's degree	\$103,470
Health Specialties Teachers, Postsecondary	12,400	2,346	Doctoral or professional	\$105,520
Financial Managers	19,870	3,389	Bachelor's degree	\$131,610

Source: Labor and Economic Analysis Division, NC Department of Commerce.

This wage bifurcation correlates with educational achievement: rapidly growing occupations either require at least a bachelor’s degree and offer the highest incomes or are low-paying occupations that typically require a high school degree or less (Table 4). This relationship does not imply higher education alone will be sufficient to solve economic challenges. Wages within educational groups, including for college degree holders, are also becoming more bifurcated.

The rate of change in real wages over time also varied. At the lower end of the income spectrum, wages increased some from 2000 to 2019. By contrast, wage growth for middle-income occupations either decreased or failed to increase by much. Still, the greatest overall gains were experienced at the very top, with the majority of overall wage growth occurring among the top ten to one percent of wage-earners.

**Figure 15: Percent Change in Wage and Salary Income, 2000 to 2019**



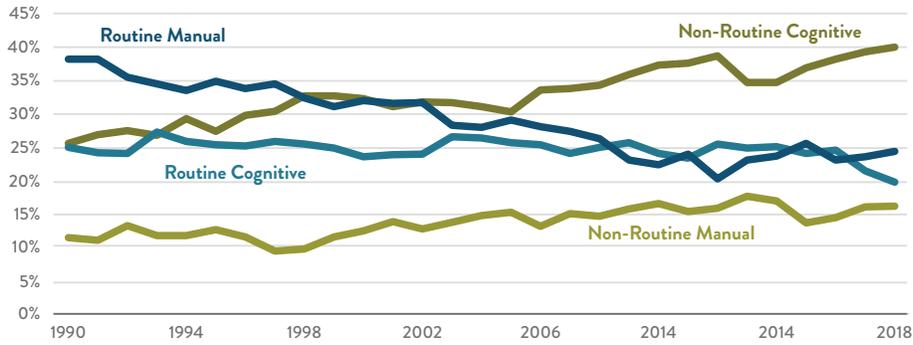
*Figure 15: Percent Change in Wage and Salary Income, 2000 to 2019. While real wages have grown the most for the very lowest and highest ends of the income spectrum across the United States, this trend is especially true for North Carolina. From 2000 to 2019, salaries and wages across the state at the 99th percentile grew by 60%, at the 10th percentile by 25%, and at the 50th percentile grew by just 3%. Data provided by the Bureau of Labor Statistics Current Population Survey, Annual Social and Economic Supplement (ASEC).*

The trends above illustrate an expanding divide between the state’s poor and wealthy households. They also indicate a hollowing out of middle-income opportunities, with middle wage occupations failing to display meaningful growth, and wages for that same group stalling. Those able to secure the highest-paying jobs see disproportionate wage growth, while those in the middle fall further behind. To use the metaphor of a ladder, the state is losing the middle rungs and with them a critical path for residents moving up from the bottom.

One additional consideration to future opportunities is the changing nature of jobs themselves, and the degree to which they may be susceptible to automation. To assess this change, it is possible to divide existing occupations into whether they involve primarily manual or cognitive activities, and whether those activities are primarily routine or non-routine. Since the late 1990s, nonroutine jobs have been growing as a portion of total jobs, while the share of routine jobs has fallen. In particular, nonroutine cognitive jobs (sometimes thought of as “knowledge jobs”) have increased from 30% of jobs in 1997 to 40% in 2018, while routine manual jobs (“blue collar jobs”) have fallen from 34% to 24%.<sup>11</sup>

<sup>11</sup> Occupational data from IPUMS-CPS and North Carolina Department of Commerce calculations.

**Figure 16: Routine Jobs Shrink while Non-Routine Jobs Increase in North Carolina**  
*Percent of primary jobs by degree of routine and cognitive requirements*



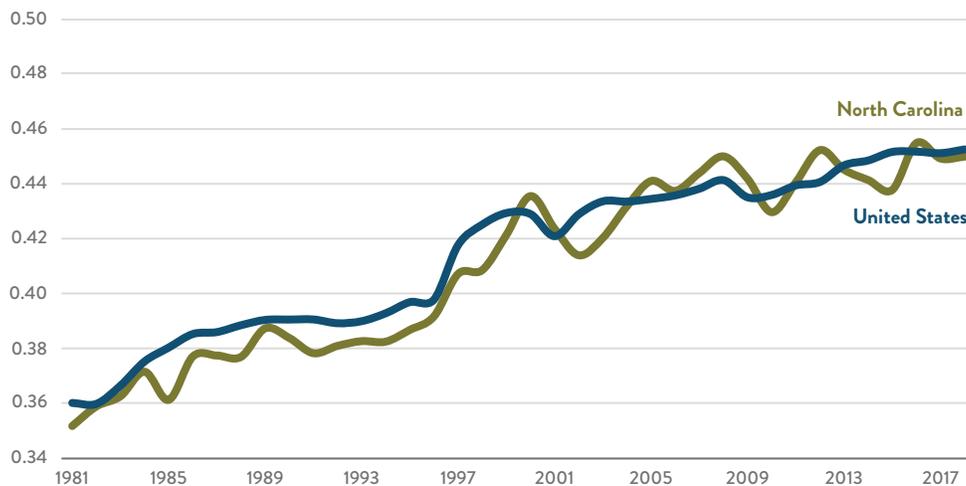
Source: IPUMS-CPS, University of Minnesota, [ipums.org](http://ipums.org).

From 2017 to 2018, nonroutine cognitive (“knowledge”) and nonroutine manual (“service”) jobs increased by 6.6% and 5.2% respectively. Routine cognitive (“office and sales”) jobs decreased by 4.4%, though routine manual (“blue collar”) jobs grew 8.4%. Based on employment projections through 2026, non-routine jobs are expected to continue their growth as a portion of the job market.

## Income

The stark bifurcation of employment opportunities has negative impacts on the well-being of the majority of North Carolinians, which fundamentally limits economic mobility. Rising inequality impacts households’ ability to afford housing, childcare, health care, education and basic necessities. While there are many ways of measuring inequality and economic burdens, the simplest measure is to examine the distribution of household income in the state. The divide between rich and poor households is seen in the rise of the Gini coefficient, a widely used key indicator of household income inequality, which has risen both in North Carolina and since 1981.

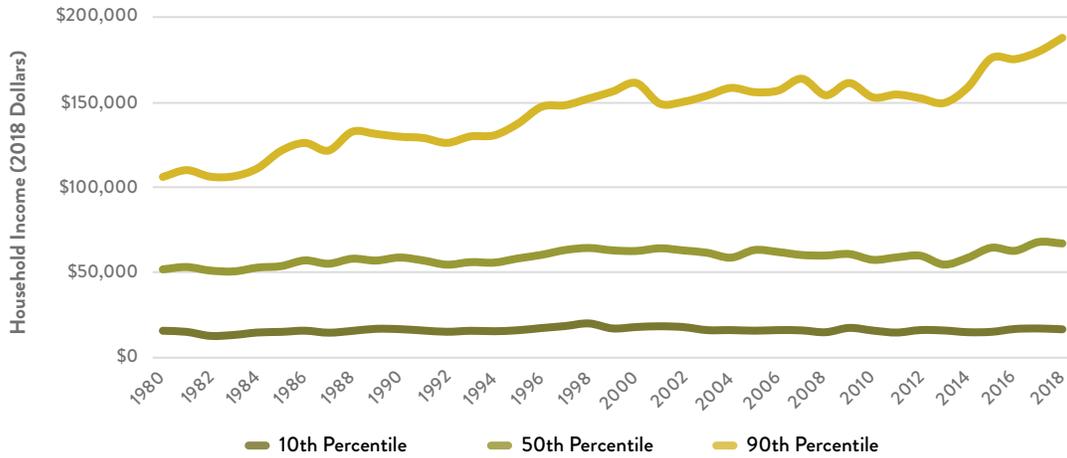
**Figure 17: Gini Coefficient, 1981 to 2018**



**Figure 17: Gini Coefficient, 1981 to 2018.** The Gini coefficient is a measure of inequality, and when applied to household income can measure the concentration of income. Perfect equality where all households earn the same income would result in a Gini coefficient of 0, while perfect inequality where one household earns all of the income yields a coefficient of 1. Steady increases in North Carolina’s Gini since 1980 are in alignment with national trends. Large increases beginning in the late 1990s correspond with the decline of manufacturing and increasing importance of high- and low-income service sectors. Data provided by the Bureau of Labor Statistics Current Population Survey, based on household income.

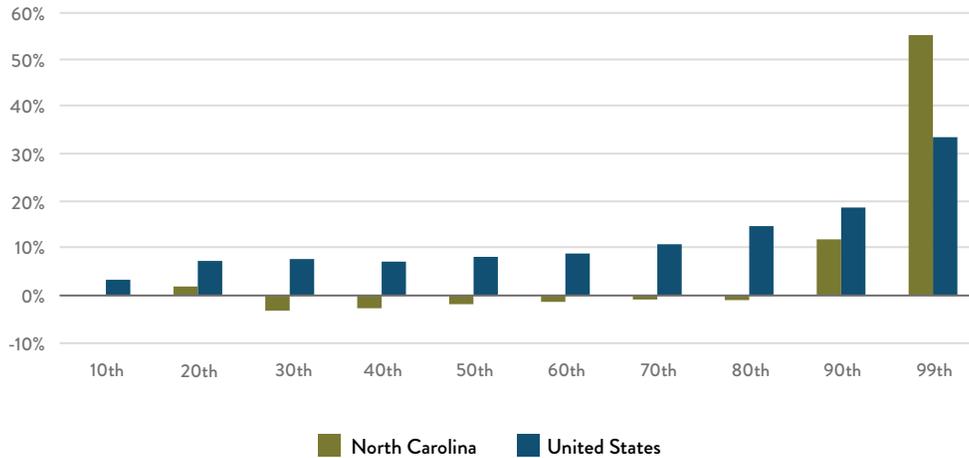
Since 1980, only the wealthiest households in North Carolina experienced meaningful growth in inflation-adjusted incomes (Figure 12). This trend became particularly evident during the state’s post-recession economic recovery and differs from the national trend. Nationally, households across the wage spectrum experienced some increase in their annual incomes since 2000, but only those households in the top 10% experienced growth in North Carolina (Figure 13). Nearly all others experienced decline.

**Figure 18: Real Household Income, 1980 to 2018**



**Figure 18: Real Household Income, 1980 to 2018.** The growth of inflation-adjusted household income at the 90th percentile and the stagnation of household incomes at the median and 10th percentile are further evidence of growing income inequality. Data provided by the Bureau of Labor Statistics Current Population Survey.

**Figure 19: Percent Change in Household Income, 2000 to 2019**

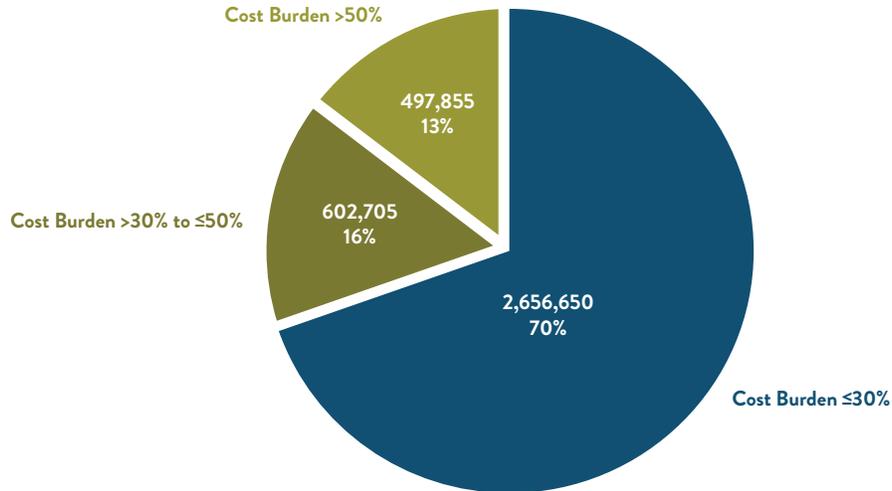


**Figure 19: Percent Change in Household Income, 2000 to 2019.** Where real household incomes have risen across the spectrum in the United States, North Carolina has only experienced growth among the highest earning households. Data provided by the Bureau of Labor Statistics Current Population Survey.

## Housing Cost Burdens

According to the U.S. Department of Housing and Urban Development, 29 percent of all North Carolina households (1.1 million) were considered housing cost-burdened in 2016, defined as spending more than 30 percent of their incomes on housing. Within this group, nearly 500,000 households were considered severely cost-burdened, spending more than 50 percent of their income on housing.

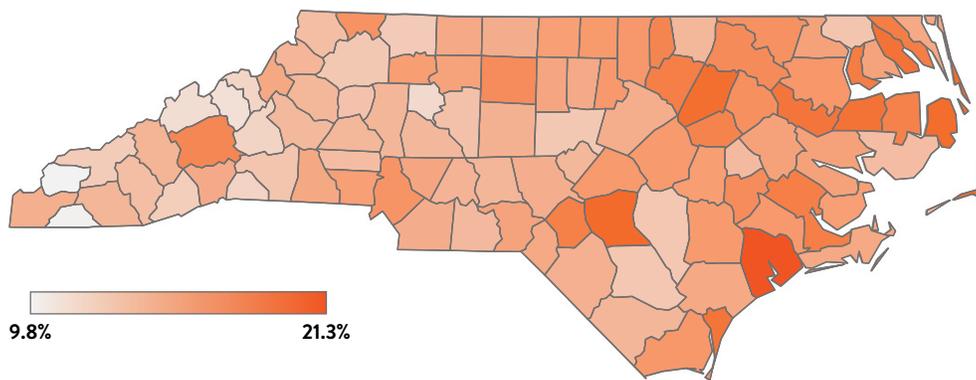
**Figure 20: North Carolina Households with Housing Cost Burden, 2012 to 2016**



*U.S. Department of Housing and Urban Development (HUD), Comprehensive Housing Affordability Strategy (CHAS) data (custom tabulations of American Community Survey (ACS) data from the U.S. Census Bureau).*

Relative to the United States, North Carolina has a similar share of households experiencing cost burden. The factors causing North Carolina’s current affordability issues are complex, however the constrained construction of moderate-income housing and stagnating household incomes are likely contributors. There are two sides to analyzing housing affordability; the cost of housing (rent or home purchase prices), as well as wage income available through the labor market. Given that there are divergent patterns of employment and wage growth across North Carolina regions, it is important to understand how these labor market outcomes interact with local housing supply conditions to produce differential levels of housing burden across the state. According to a recent report by the [Pew Charitable Trusts](#), the housing affordability crisis has also recently spread to include rural areas. As seen in the map below, the counties with the highest percentages of cost-burdened households are in the eastern part of the state as well as pockets in the west. Of course, in terms of sheer numbers, the more populous counties have more cost-burdened households—Wake and Mecklenburg Counties alone have nearly 120,000 cost-burdened households.

**Figure 21: Percent of Households with Housing Cost Burdens**



*Source: U.S. Department of Housing and Urban Development Comprehensive Housing Affordability Strategy, 2012-2016. Housing Cost Burdened is defined as paying more than 30 percent of a household’s income on housing. Includes renters and homeowners.*

**Figure 21: Percent of Households with Housing Cost Burdens.** This figure focuses on renter households with incomes below \$75,000. In all but one metropolitan statistical area, more than half of low- and moderate-income households pay more than 30 percent of income in rent.

**Figure 22: Percentage of Low to Moderate Income Renters with Housing Cost Burdens**



Source: Census Bureau, American Community Survey, 2014-2018. Households with incomes less than \$75,000 in rental units.

## Childcare Costs

Another financial burden to households in North Carolina is the high cost of childcare, which has increased by 2,000 percent over the past four decades nationally.<sup>12</sup> According to a recent report by Child Care Aware of America, the average annual household in the South had childcare expenses of \$18,442 in 2018—a slightly higher expense than housing.<sup>13</sup> This level of expense limits the willingness of many individuals to participate in the formal labor market, particularly when considering the wage levels of many available positions. While subsidized childcare assistance is available to some parents, less than 20% of eligible children currently receive this assistance due to inadequate state and local funding.<sup>14</sup> In response to this issue, the [NC Early Childhood Action Plan](#) has included a goal to decrease the percent of family income spent on child care from the current 10 -12 percent to 7 percent by 2025.

## Health Care

The health of the current and future workforce is fundamental to economic development, and can influence the ability to work, workers' productivity, and can influence business decisions about where to relocate or expand operations. Differences in health status exist by socioeconomic status, race, and geography, among other categories. In addition, health care costs are a significant burden on household incomes. According to a recent report, the cost burden of health coverage (defined as median income divided by average premium) climbed 28 percent from 2010 to 2016 in the US, with family private-insurance premiums growing to \$17,710.<sup>15</sup> During this same period median household incomes increased by only 20 percent. In addition, deductibles grew 55 percent during this same time, further increasing the out-of-pocket costs for families. According to another study, the average premium in North Carolina for an employee-sponsored family plan was \$18,211 in 2018, up from just over \$12,000 in 2008, with employees contributing one-third of the cost.<sup>16</sup> When combined with deductibles, this resulted in a total potential out-of-pocket costs of \$8,091, or 13.9% of state median income.<sup>17</sup>

12 Kornrich, S., Furstenberg, F. Investing in Children: Changes in Parental Spending on Children, 1972-2007. *Demography* 50, 1-23 (2013).

<https://doi.org/10.1007/s13524-012-0146-4>

13 [https://cdn2.hubspot.net/hubfs/3957809/2019%20Price%20of%20Care%20State%20Sheets/Final-TheUSandtheHighPriceofChildCare-AnExaminationofaBrokenSystem.pdf?utm\\_referrer=https%3A%2F%2Fwww.childcareaware.org%2Four-issues%2Fresearch%2Fthe-us-and-the-high-price-of-child-care-2019%2F](https://cdn2.hubspot.net/hubfs/3957809/2019%20Price%20of%20Care%20State%20Sheets/Final-TheUSandtheHighPriceofChildCare-AnExaminationofaBrokenSystem.pdf?utm_referrer=https%3A%2F%2Fwww.childcareaware.org%2Four-issues%2Fresearch%2Fthe-us-and-the-high-price-of-child-care-2019%2F)

14 [https://ncchildcare.ncdhhs.gov/Portals/0/documents/pdf/C/Child\\_Care\\_Subsidy\\_Fact\\_Sheet\\_for\\_2018-2019.pdf?ver=2019-11-13-161832-777](https://ncchildcare.ncdhhs.gov/Portals/0/documents/pdf/C/Child_Care_Subsidy_Fact_Sheet_for_2018-2019.pdf?ver=2019-11-13-161832-777)

15 <https://www.healthaffairs.org/doi/10.1377/hblog20190327.999531/full/>

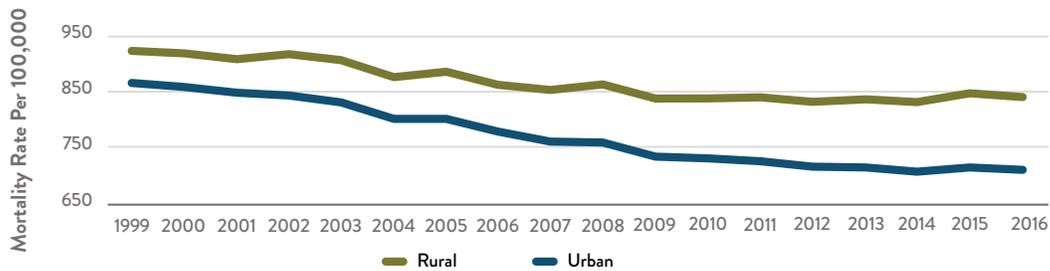
16 <https://www.commonwealthfund.org/publications/2019/nov/trends-employer-health-care-coverage-2008-2018>

17 [https://interactives.commonwealthfund.org/2019/nov/state-premium-trends/state-profiles/North\\_Carolina.pdf](https://interactives.commonwealthfund.org/2019/nov/state-premium-trends/state-profiles/North_Carolina.pdf)

While the high cost of health care is a burden for many North Carolinians, other suffer from a lack of insurance in the first place. According to the Cone Foundation, North Carolinians are about twice as likely to be uninsured as their neighbors in Kentucky or West Virginia, states which expanded Medicaid.<sup>18</sup> They point to Census data showing 994,000 North Carolina adults aged 19 to 64 lacked health insurance coverage in 2017. This lack of coverage and the associated negative health outcomes further hinder the state's economic development by keeping workers out of the workforce and reducing productivity for those who are employed.

Another related issue is the status of rural health, including the viability of rural hospitals and the difficulties in recruiting and retaining medical professionals in rural areas. As the following chart shows, there is a stark difference between urban and rural areas nationally in mortality rates:<sup>19</sup>

**Figure 23: Urban-Rural Mortality, 1999 to 2016**



Source: U.S. Centers for Disease Control and Prevention

According to the Sheps Center for Health Services Research at UNC-Chapel Hill, 11 hospitals have closed since 2006 in North Carolina, with most located in non-metro regions.<sup>20</sup> While there are many factors that can lead to a rural hospital shutting down, the National Rural Health Association has found that the lack of State-level Medicaid expansion is a major predictor of closure. According to their data, being located in a Medicaid expansion state decreases the likelihood of closure by 62.3 percent.<sup>21</sup>

Recruiting and retaining medical professionals in rural areas is also a challenge. Seventy-seven percent of rural counties are short on primary care doctors, and 9 percent have none, according to the National Rural Health Association's Policy Institute.<sup>22</sup> More than 25 percent of primary care physicians in rural areas are 60 or older, compared with 18 percent in urban areas, according to a 2019 article in the *New England Journal of Medicine*.<sup>23</sup> As a result, many states are experimenting with efforts to expand telemedicine, although regulatory and infrastructure barriers (such as a lack of broadband access or adoption) still exist.

## Infrastructure Needs

In addition to measures of income and labor market outcomes, infrastructure is a critical component of economic development. Transportation infrastructure as well as water and wastewater infrastructure have long been recognized as essential to the economy, while available and affordable broadband connectivity is increasingly seen as a necessary infrastructure fundamental.

Transportation infrastructure is critical to economic development to connect businesses, communities, and workers. Since 2010, average commutes have risen both nationally and in North Carolina. In the state, the mean commute time has risen from 23 to 25 minutes. In 2017, 32 percent of North Carolina's workers traveled 25 miles or more between home and work, up 8 percent from 2002. Out-of-county commuting has increased, with only 14 out of 100 counties having more than 50% of their workers living and working in the same county as of 2017, down from 47 counties in 2002.<sup>24</sup> North Carolina's large metros also have low rates

18 <https://www.conehealthfoundation.com/app/files/public/11568/expanding-medicaid-in-north-carolina---2019.pdf>

19 <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2020/01/31/rural-americas-health-crisis-seizes-states-attention> 20 <https://www.shepscenter.unc.edu/programs-projects/rural-health/rural-hospital-closures/>

21 <https://news.stlpublicradio.org/post/hospital-association-says-expanding-medicaid-would-keep-rural-missouri-hospitals-open#stream/0>

22 [https://www.ruralhealthweb.org/NRHA/media/Emerge\\_NRHA/Events/PI/2019/NRHA-who-we-are-and-why-we-fight.pdf](https://www.ruralhealthweb.org/NRHA/media/Emerge_NRHA/Events/PI/2019/NRHA-who-we-are-and-why-we-fight.pdf)

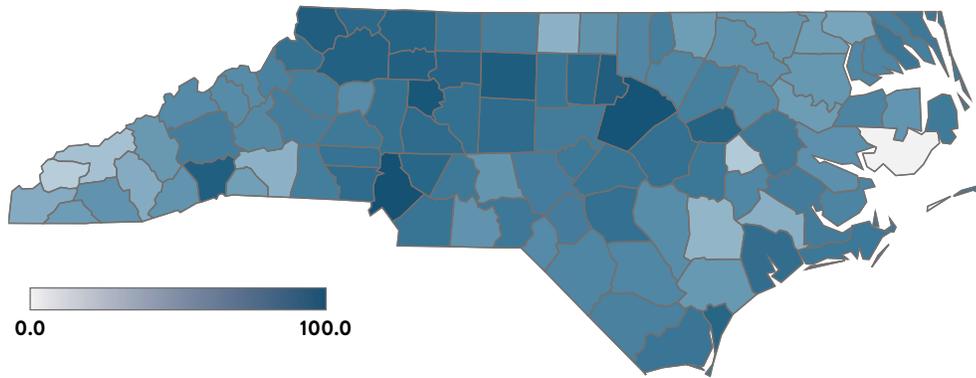
23 <https://www.nejm.org/doi/full/10.1056/NEJMp1900808>

24 U.S. Census Bureau, Longitudinal-Employer Household Dynamics Program, Private Primary Jobs.

of public transit use for work relative to other large metros. Addressing the relationships between transportation infrastructure and housing development will be key to better connecting workers to jobs. One possible solution lies in the set of emerging technologies known as Connected and Automated Vehicles (CAVs), which have the potential to increase mobility of workers as well as transform other aspects of the economy.

In addition to physically connecting workers to jobs through transportation infrastructure, high-speed broadband capacity is increasingly seen as a vital economic development asset. However, large portions of the state continue to have low availability and quality, as measured by the NC Broadband Infrastructure Office’s composite index including types of technology, number of providers, access to specific speed thresholds, and other factors.

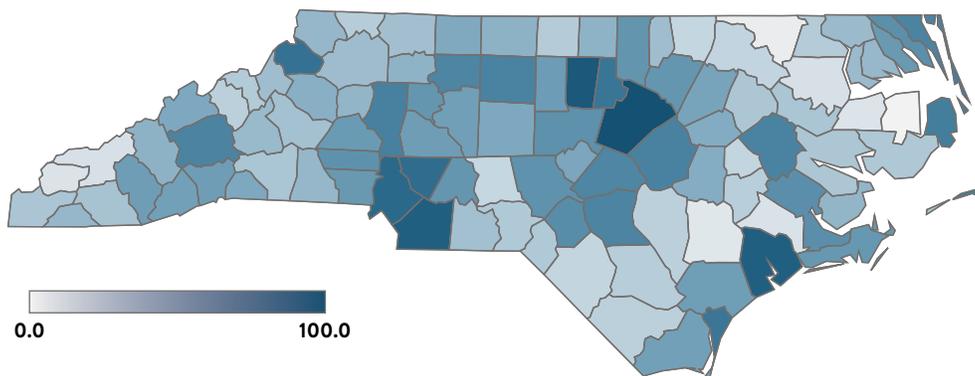
**Figure 24: Broadband Availability and Quality**



Source: NC Broadband Infrastructure Office, 2017

While broadband availability has greatly expanded throughout the state, the greatest rates of adoption occur primarily in the state’s urban counties. Broadband availability is one factor that influences adoption rates. However, even in areas with adequate coverage, subscription costs, access to computers, and lack of digital literacy can suppress adoption rates, particularly for low-income households. In addition, many counties lag in broadband adoption potential as measured by the share of homes subscribing to DSL, cable or fiber or not subscribing at all (no internet access) , age, income, presence of children and educational attainment among others.

**Figure 25: Broadband Adoption Potential**



Source: NC Broadband Infrastructure Office, 2017

Even within counties with high adoption rates there are large disparities between census tracts. For example, while Wake County’s overall subscription rate is 81.7 percent, in one of the county’s census tracts located in downtown Raleigh, only 39.15 percent of the households subscribe to broadband. Meanwhile, an adjacent census tract’s subscription rate is 75.2 percent.

To help tackle these disparities, [North Carolina’s 2017 State Broadband Plan](#) defined five goals for the state to achieve by June 2021:

- Increase the percentage of households with access to fiber optic cable to 50 percent by June 2021
- Increase the percentage of households with access to broadband to 100 percent by June 2021
- Increase household adoption rates to over 60 percent by June 2021
- Affordable access to the internet outside of school for 100 percent of K-12 students by June 2021
- A state-wide model for the development and deployment of local, community-based digital literacy programs

Several recommendations in the plan specifically focus on supporting economic development throughout the state, including 1) incorporating broadband into the “Certified Work Ready” Communities Initiative, 2) branding the state as a national digital leader, 3) leveraging existing small business and workforce development tools, and 4) encouraging communities to include broadband in their economic development plans.<sup>25</sup>

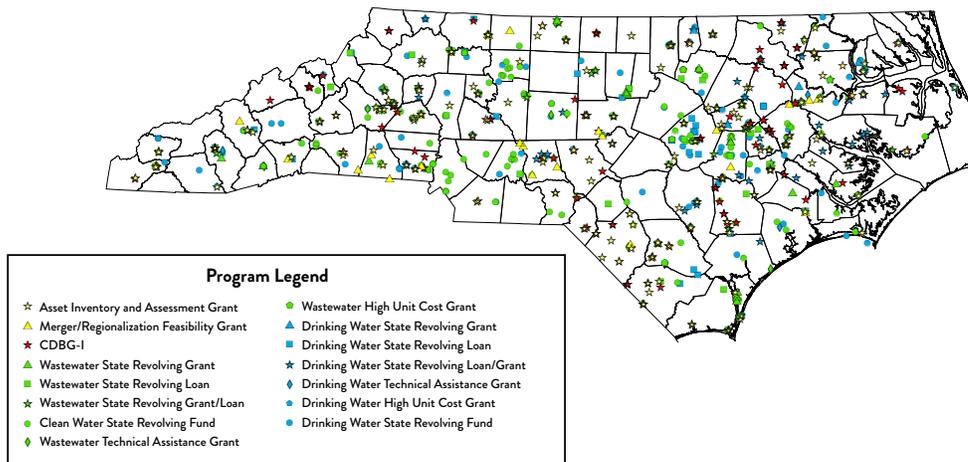
## Water and Wastewater

Water and wastewater infrastructure are fundamental to economic development. [North Carolina’s 2017 Statewide Water and Wastewater Infrastructure Master Plan](#) describes the state’s challenges as “a combination of poor water infrastructure condition, the need for modernization and the lack of sufficient revenues that threaten the viability of some water utilities.”

One issue is the state’s large number of small, independent systems, many of which have unique challenges such as small customer bases and limited revenue. According to the Master Plan, of the 2,000 community water systems operating in the state, one-third of these systems have customer bases of 100 people or less. The smallest 1,800 of these systems serve about 10% of the state’s population. In contrast, the ten largest water systems serve 30% of the state’s population.

In addition, the two main previous funding sources for the construction of these systems—federal grant funds or revenue from large manufacturers—have both declined over time. While new users can help pay for infrastructure in growing communities, paying for aging infrastructure is more difficult in areas with low population growth and a smaller industrial base. The following map shows state investments in waste and wastewater infrastructure projects over the past five years, demonstrating the numerous, dispersed investments necessary to maintain these systems:

**Figure 26: Water and Wastewater Infrastructure Projects Funded from January 2014 to March 2019**



25 <https://www.ncbroadband.gov/connectingnc/economic-development/>

## CONCLUSION

North Carolina's economy, while strong, still faces challenges to its future success. While tackling many of these issues seems daunting and even beyond the ability of one state to influence, the problems identified here serve as a starting point for strategic thinking and prioritization of efforts. Armed with this fundamental overview of the state, more detailed assessments can be carried out and feedback can be collected from industry, government, and the public at large to craft the next bold, yet actionable, steps the state will take to ensure future prosperity.



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