

## KEY FINDINGS

### Demographic Trends

- Orange County has grown faster than the state according to recent estimates (8.4% vs. 7.7% since 2010). The county population increase of 11,258 since 2010 was the 17<sup>th</sup> largest county increase and its growth rate (8.4%) was the 19<sup>th</sup> fastest statewide.
- While Chapel Hill maintained steady growth, the pace was below overall state growth (4.6% vs. 7.7%) and was slower than some of the rapidly growing cities of similar size. Neighboring Carrboro's population increased by 10.1% over this time while Hillsborough's population grew by an estimated 9.3%. This slower growth in Chapel Hill compared to prior decades and other Orange County municipalities likely reflects the earlier importance of annexation to the city's growth.
- Most population growth in Orange County is from net in-migration. Between 2010 and 2017, nearly 8,000 new residents were added to Orange County from net in-migration, accounting for 71% of the county's total population growth. Just over 3,300 new residents were added due to natural increase, with a total of 8,872 births and 5,565 deaths occurring in Orange over this time.
- Since 1990, the aging of the Baby Boomer population had significant impacts on state age structure and local age structure shifts were even larger. In 1990, more than one in three Orange County residents were 25-44 (35%) and 15% were 45-64. Today, the 25-44 year-olds comprise 25% of the population, a 10 percentage point decrease from 1990. The 45-64 year-old share increased 11 percentage points over this time, rising from 15% to 26%.

### Impact of Students on Local Statistics

- The presence of a large student population distorts local income statistics due to the large number of individuals with artificially low incomes. Accounting for the high proportion of students in the area provides more realistic estimates of local economic conditions. For example, for individuals aged 3 and older:
  - Chapel Hill's college-adjusted poverty rate is 8.7%, a decline of 11.6 percentage points from the original, non-adjusted rate.
  - Orange's college student-adjusted poverty rate is 9.5%, a decline of 4.8 percentage points from the non-adjusted rate.
- The low incomes of college students distort median household income figures just as they distort poverty rates. Households headed by individuals under 25 had median incomes of \$14,257, more than \$100,000 less than the median incomes of 45-64-year-old households (\$116,114). Median family income focuses only on individuals who are living in family households and will exclude most students. While the state median family income was \$57,667, Orange's was higher (\$88,887) and Chapel Hill's was even higher (\$115,538).

## Commuting Trends & Local Impacts

- More workers are crossing county lines to go to work. Between 2005 and 2015, the number of individual workers living in Orange County increased by 5,339 or 10%—and the number of jobs in Orange County increased 16,302 or 11%—but the number of individuals living and working in Orange declined 2,272 or nearly 10%.
- Local populations are significantly impacted by net in-commuting, which highlights demands for infrastructure and services that are larger than predicted by resident population alone. In 2015, accounting for the commuter population yielded large increases in the estimated daytime population:
  - Orange County had 7,317 net in-commuters. The estimated daytime population (148,880) was 5% larger than the county’s base population.
  - Chapel Hill had 25,002 net in-commuters. The estimated daytime population (84,119) was 42% larger than the town’s base population.

## Contact

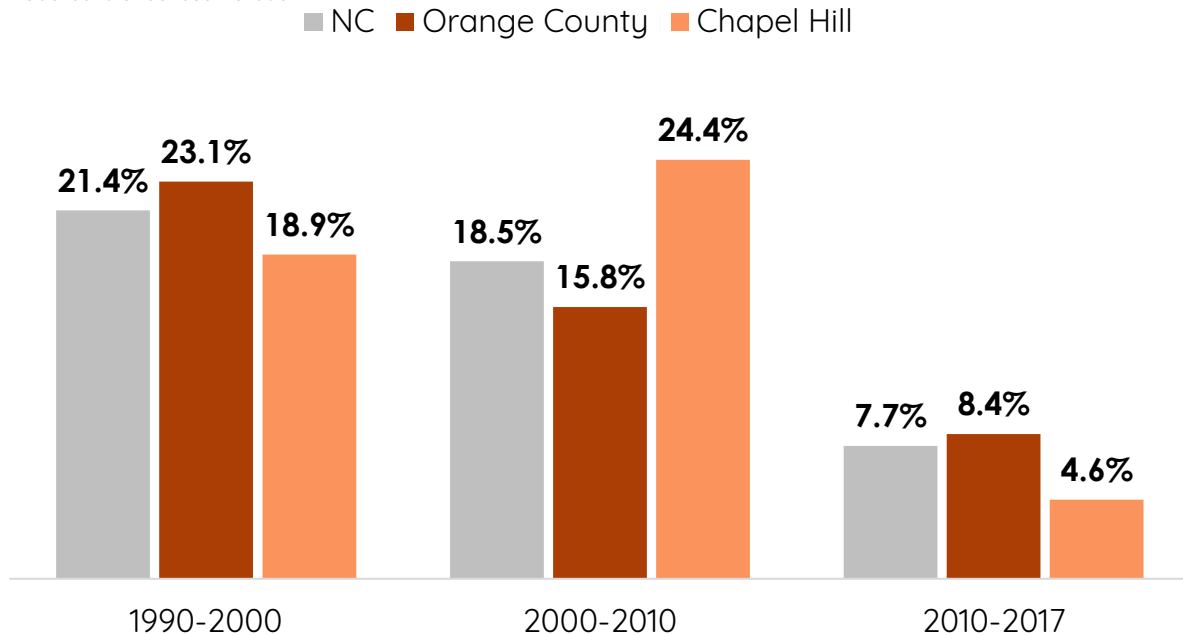
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# POPULATION GROWTH & CHANGE

## Historic Trends (1990-2017)

### Observed and Estimated Growth Rates, 1990-2017

Source: U.S. Census Bureau



### Growth continues, but below rates seen in 1990s and 2000s

- North Carolina had explosive growth during the 1990s – increasing population by 1.4 million or 21.4%. Orange County grew faster than the state over this period (23.1%) with an increase of nearly 21,700 residents. Though Chapel Hill experienced significant growth, its gain of 7,300 residents (18.9%) was slightly lower than the state rate. (Note: data for Chapel Hill includes portions of the town outside of Orange County.)
- As population grows larger, we generally expect overall growth rates to slow. While NC gained slightly more people (1.5 million) during the 2000s, the growth rate of 18.5% was below the observed growth rate in the 1990s. During the 2000s, Chapel Hill's population grew faster than the state (24.4%), gaining just over 11,200 residents. Orange County gained nearly 18,300 residents during the 2000; while the county maintained a strong growth rate (15.8%), it was slightly lower growth than the state and surrounding counties.
- Unlike NC and Orange County, Chapel Hill can also grow by annexation. This played a role in the town's growth in both the 1990s and 2000s. Town land area increased by 3.2 square miles between 1990 and 2000 and by another 1.4 square miles between 2000-2010.
- Based on the just-released 2017 estimates from the U.S. Census Bureau, the state, Orange County, and Chapel Hill have all experienced steady increases in their population. North

Carolina has gained nearly 740,000 new residents since 2010, an overall increase of 7.7%. This represents a compound annual growth rate of 1%, down substantially from 1.7% during the 2000s.

- Orange County’s growth outpaced the state between 2010 and 2017 based on the new estimates. The county grew by nearly 11,300 residents, an increase of 8.4%. The county’s compound annual growth rate for the 2010-2017 time is 1.1%, slower than the growth it experienced during the 2000s (1.5%)
- Chapel Hill’s growth for 2010-2017 is slower than the surrounding county and the state but still substantial: the town grew by 2,629 new residents (4.6%) since 2010. The city’s compound annual growth rate for 2010-2017 is 0.6% compared to 2.2% during the 2000s. However, it is difficult to make a direct comparison between current and prior growth rates due to the influence of annexation.

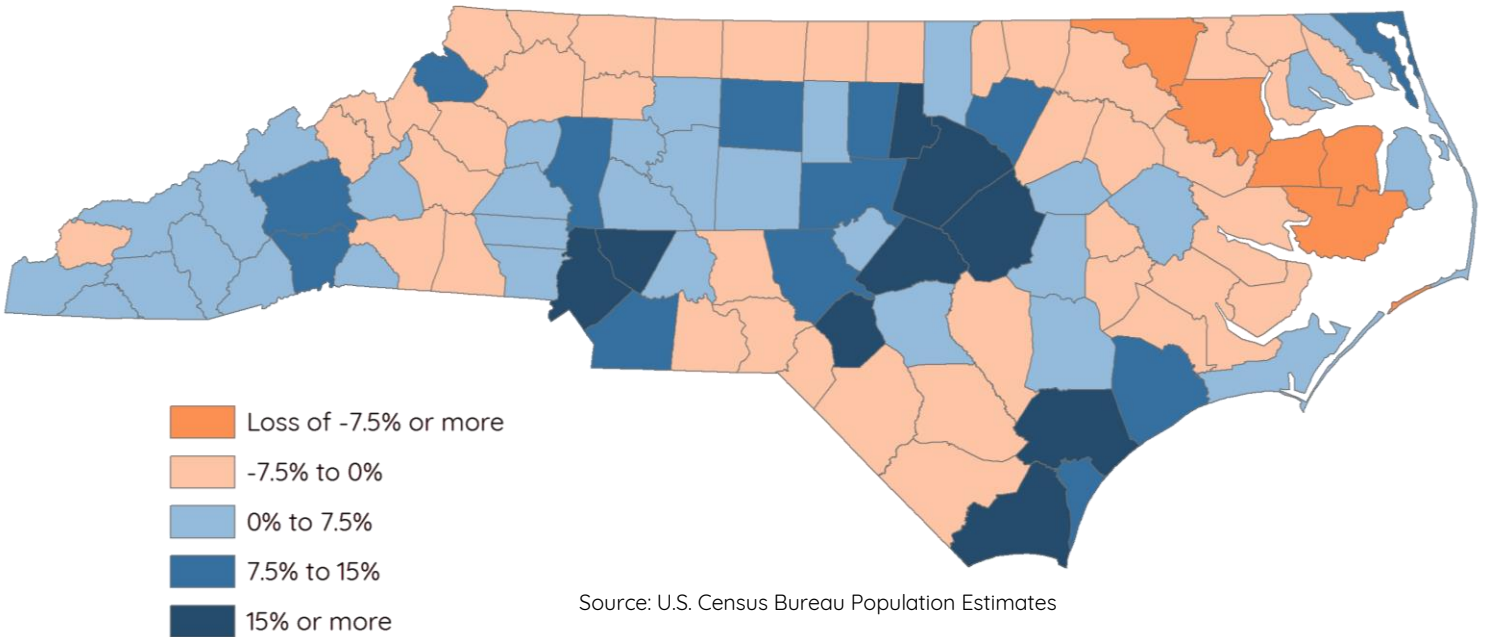
<b>Population Growth &amp; Change, 1990-2017</b>			
	<b>NC</b>	<b>Orange County</b>	<b>Chapel Hill</b>
<b>Numeric Change</b>			
1990-2000	1,420,676	21,680	7,300
2000-2010	1,486,170	18,270	11,214
2010-2017	737,698	11,258	2,629
<b>Percent Change</b>			
1990-2000	21.4%	23.1%	18.9%
2000-2010	18.5%	15.8%	24.4%
2010-2017	7.7%	8.4%	4.6%

Source: U.S. Census Bureau

### **Triangle and other NC metros growing rapidly**

While 46 counties statewide have lost population since 2010, the state’s metro areas have boomed. Wake and Mecklenburg have been the 2<sup>nd</sup> and 3<sup>rd</sup> fastest-growing counties in the state since 2010, growing by an estimated 19% and 17%, respectively. Combined, these counties gained an estimated 328,000 new residents, representing 45% of all growth in North Carolina from 2010-2017. These core metropolitan counties are surrounded by fast-growing suburban and exurban counties.

**NC County Growth Rate, 2010-2017**



Orange County, like many other Triangle area counties, has grown at a pace faster than the state according to recent estimates. With an estimated population of 145,000 in 2017, Orange County was the 19<sup>th</sup> largest North Carolina county. The county population increase of 11,258 since 2010 was the 17<sup>th</sup> largest county increase and its growth rate (8.4%) was the 19<sup>th</sup> fastest statewide.

**Growth for Triangle area counties, 2010-2017**

	2010 Base	2017 Estimate	Numeric Change	Growth Rate
<b>North Carolina</b>	<b>9,535,721</b>	<b>10,273,419</b>	<b>737,698</b>	<b>7.7%</b>
Alamance	151,198	162,391	11,193	7.4%
Chatham	63,479	71,472	7,993	12.6%
Durham	269,984	311,640	41,656	15.4%
Harnett	114,697	132,754	18,057	15.7%
Johnston	168,872	196,708	27,836	16.5%
Lee	57,858	60,430	2,572	4.4%
Moore	88,246	97,264	9,018	10.2%
Orange	133,688	144,946	11,258	8.4%
Wake	901,059	1,072,203	171,144	19.0%

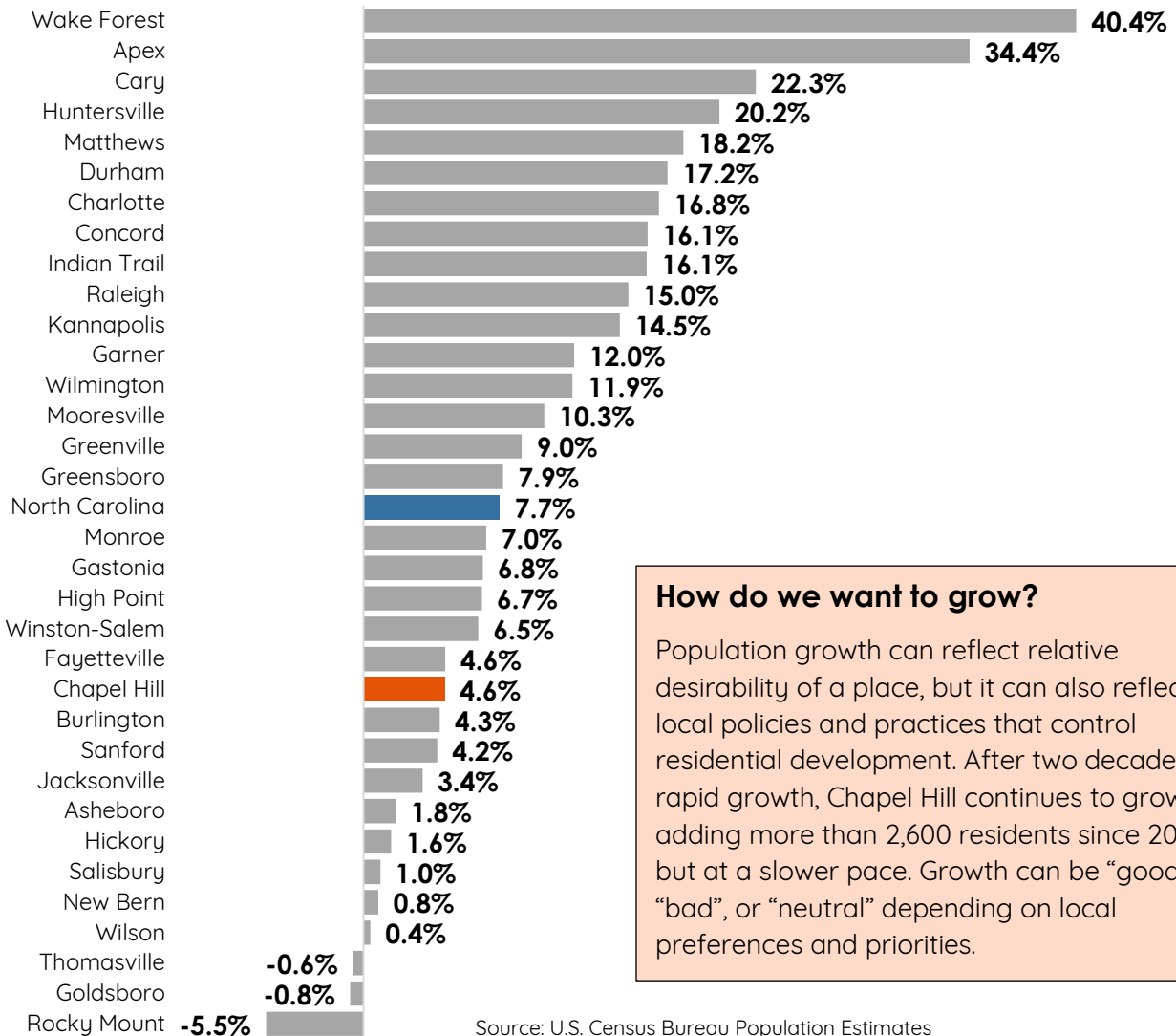
Source: U.S. Census Bureau 2017 County Population Estimates

## Chapel Hill growth in line with Fayetteville, Burlington, and Sanford

Among the 552 municipalities statewide, Chapel Hill was the 15<sup>th</sup> largest municipality in 2017 and had the 33<sup>rd</sup> largest numeric increase since 2010. The graph below highlights the estimated 2017 growth rate for NC municipalities that had a population of 25,000 or more in 2010. Six municipalities not included in this graph were below this threshold in 2010 but had populations exceeding 25,000 as of 2017. These include Cornelius, Fuquay-Varina, Holly Springs, Mint Hill, Morrisville, and Statesville.

While Chapel Hill maintained steady growth, the pace was below overall state growth (4.6% vs. 7.7%) and was slower than some of the rapidly growing cities of similar size. Neighboring Carrboro’s population increased by 10.1% over this time while Hillsborough’s population grew by an estimated 9.3%. This slower growth in Chapel Hill compared to prior decades and other Orange County municipalities likely reflects the earlier importance of annexation to the city’s growth.

**Growth for Select NC Municipalities (>25K in 2010), 2010-17**



**How do we want to grow?**

Population growth can reflect relative desirability of a place, but it can also reflect local policies and practices that control residential development. After two decades of rapid growth, Chapel Hill continues to grow—adding more than 2,600 residents since 2010—but at a slower pace. Growth can be “good”, “bad”, or “neutral” depending on local preferences and priorities.

Source: U.S. Census Bureau Population Estimates

## Two Sources for Population Estimates

Population estimates are annual estimates of population change produced for the years between decennial censuses. These represent the estimated population of a place as of July 1 of the estimates year. There are two sources for annually produced population estimates: The U.S. Census Bureau and the North Carolina Office of State Budget and Management.

### U.S. Census Bureau

The U.S. Census Bureau produces population estimates for all states, counties, cities, and towns; estimates of the demographic components of population change (births, deaths, and migration) for the nation, states, and counties; and detailed demographic estimates (sex, age, race, and Hispanic origin) for the nation, states, and counties. In addition, they produce estimates of housing units for every county.

### NC Office of State Budget and Management (OSBM)

The state demographer at NC OSBM produces population estimates for North Carolina and its counties and municipalities. At the state and county level, OSBM also produces estimates of the demographic components of change and population estimates by sex, age, and race. OSBM does not currently produce estimates broken out by Hispanic origin and age or Hispanic origin and detailed race.

### Comparability & Usage Guidance

The U.S. Census Bureau and NC OSBM estimates will differ due to differences in methodology. When to use which estimate?

**To compare to communities in other states** use U.S. Census Bureau estimates; these are simultaneously produced for all municipalities and counties in the nation.

**To compare to communities within North Carolina** use NC OSBM estimates or U.S. Census Bureau estimates - just be consistent.

**To compare to state-produced budget or finance documents** use NC OSBM estimates.

**To obtain detailed population characteristics,** use U.S. Census Bureau estimates for the greatest level of detail for the county.

## Projected vs. Observed

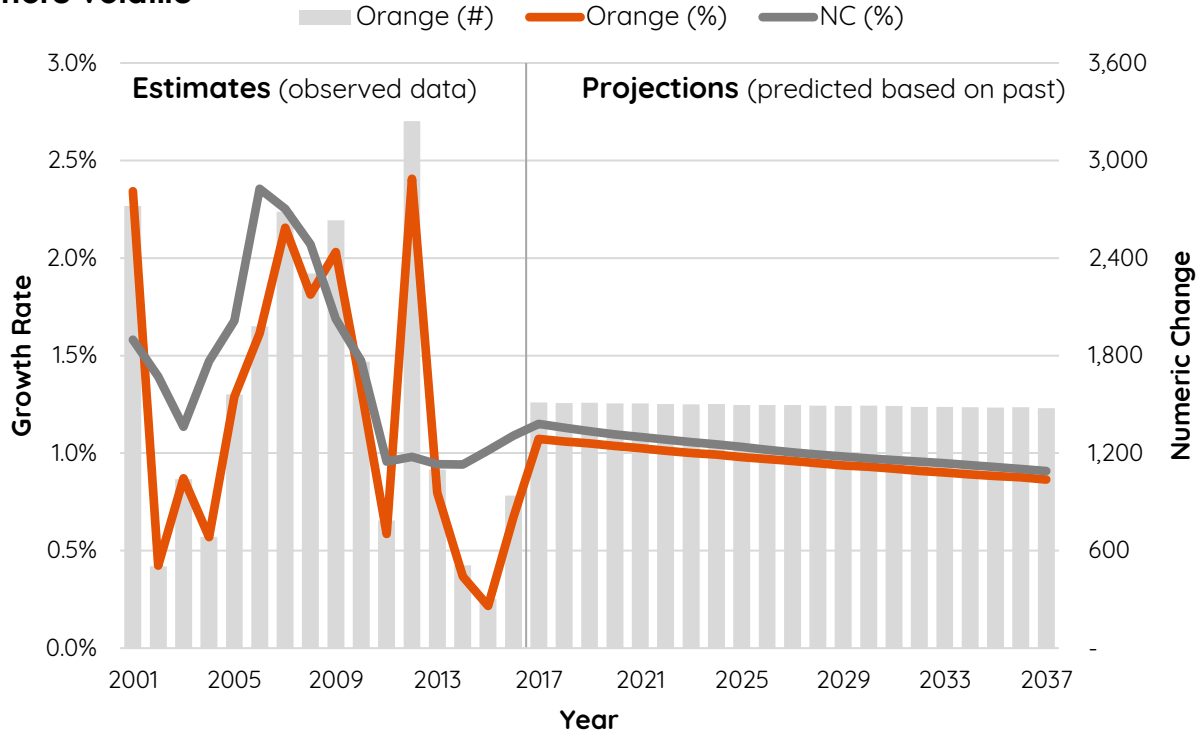
### Observed population trends more volatile than projections

Between 2017 through 2037, the North Carolina state demographer at the North Carolina Office of State Budget and Management (NC OSBM) projects that Orange County's population will grow by nearly 30,000 persons, to exceed 172,000 in 2037, an increase of 21% over 20 years. The state overall is projected to grow by 2.3 million or 22% over this time.

For every year over the next two decades, Orange County is projected to grow within 0.1 percentage points of the state's projected growth rate. As both populations grow larger, annual

growth rates will steadily decline, dropping from 1.1% in 2017 to 0.9% in 2037. This translates to an average numeric increase of just under 1,500 new persons per year in Orange County.

**NC, Orange projected to grow at steady but declining pace; actual growth more volatile**



Source: NC OSBM

Projections from NC OSBM are predictions of annual growth based on current population composition (age structure) and past trends in county mortality, fertility, and migration rates. While the future projections are a smooth line, population growth is generally much more volatile—and this volatility is higher for smaller geographic areas (e.g., county compared to state)—as evident in the annual estimates for 2000-2016 shown in the chart.

Estimated growth rates for both Orange County and North Carolina dipped sharply following the economic downturns of the early 2000s and the 2007-2009 Great Recession. The state’s annual growth rates were stable and recently increased; Orange’s annual growth rates are much more volatile, reflecting year-to-year differences in local economic and housing dynamics. (**Note:** the recent volatility in growth rates is not due to increased enrollments at UNC-Chapel Hill. They have been relatively flat since 2010.)

**How many people in 2050? Future growth projections vary widely**

Population projections often vary widely, reflecting differences in methodology, inputs, or assumptions. The general types of methods used for projecting population include:

- **Trend extrapolation methods:** Many extrapolation techniques have few data requirements and are straightforward to apply for all areas. Simple extrapolation methods include:

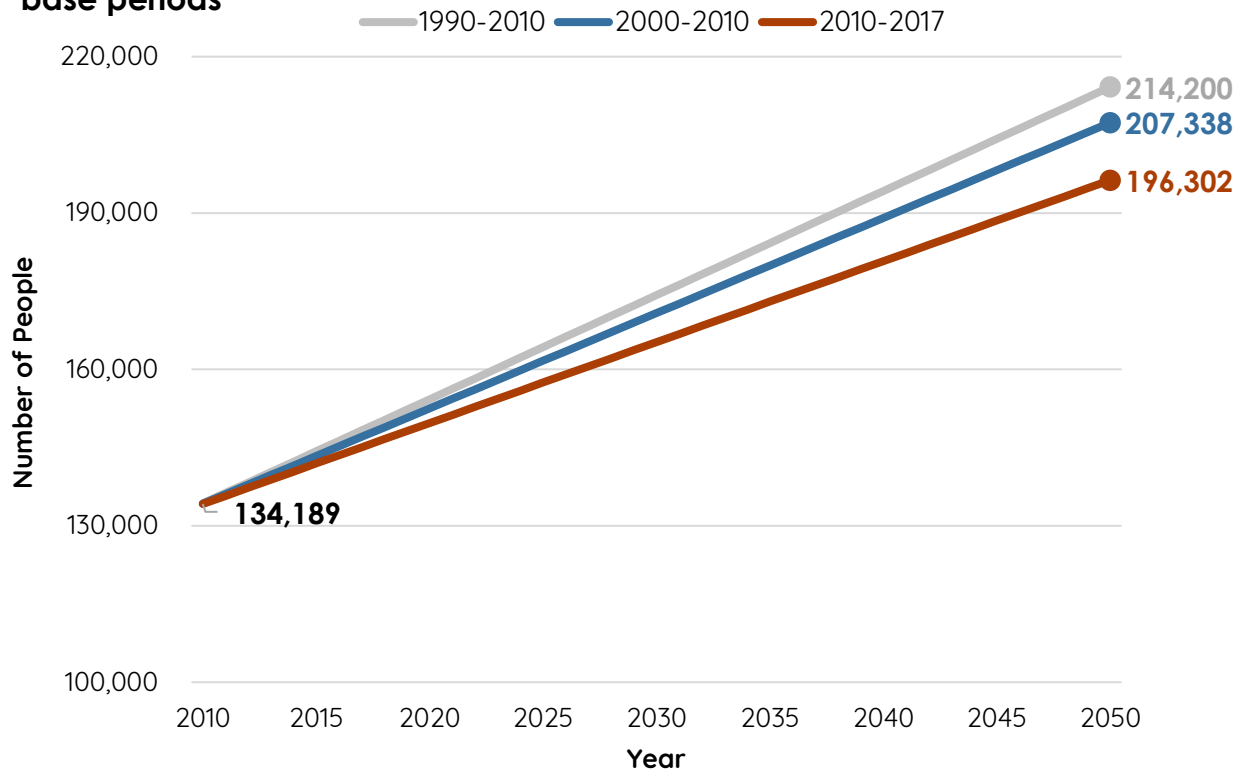


- Linear extrapolation methods assume that the population will change by the same number of people in each future year as the average annual change observed over the recent past.
- Exponential extrapolation methods assume that the population will continue to grow at the same rate as observed in the recent past. Exponential methods assume continuous compounding.
- **Cohort-component methods:** This method accounts for current population structure and trends in births, deaths, and migration patterns. This is the method used by NC OSBM for producing county and state population projections.
- **Structural methods:** Structural methods model population as a function of other variables, such as land use or employment. Future population is projected based on projections of changes in these variables.

Population projections are nearly always based on observed data and the choice of base period—meaning the years of observation used to inform the projection—can cause future projections to vary significantly, even if they are made using the same method. To illustrate this, the graphs below show **linear extrapolations** of Orange County and Chapel Hill population from 2010 to 2050 based on three different base periods:

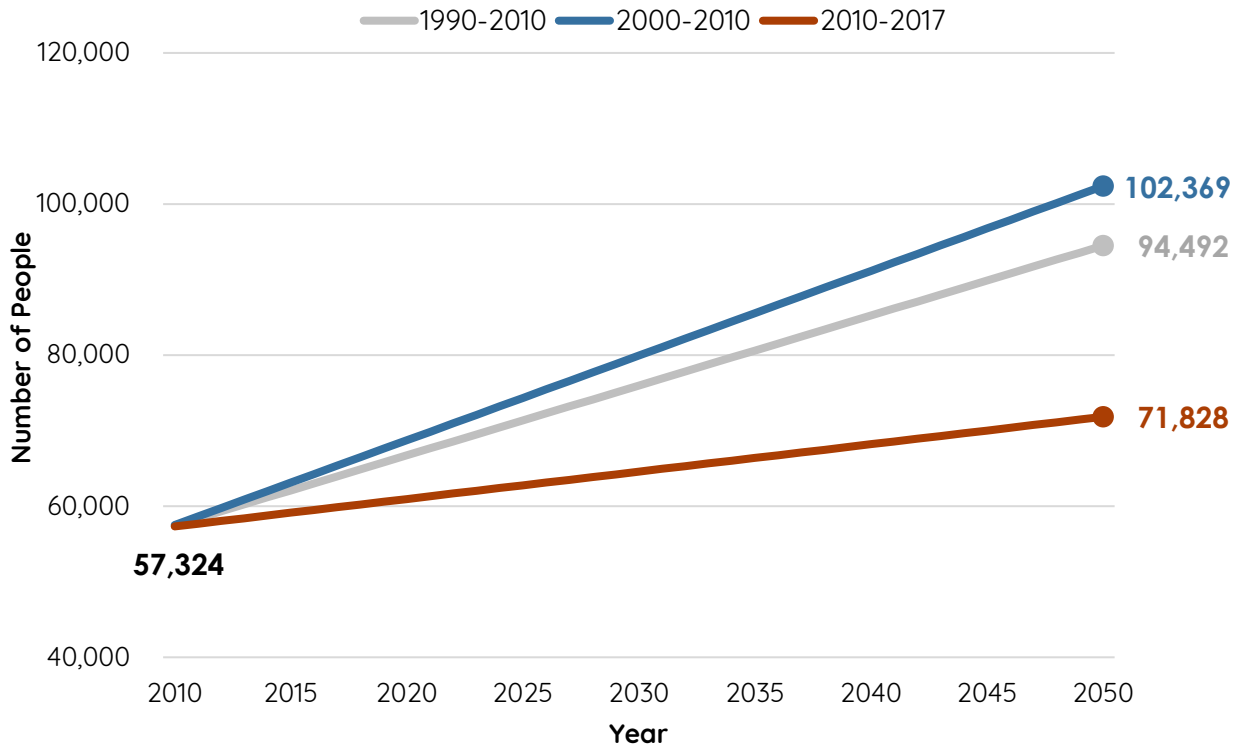
- 1) 1990-2010 (20-year base period anchored on the census)
- 2) 2000-2010 (10-year base period anchored on the census)
- 3) 2010-2017 (7.25-year base period reflecting recent estimates)

**Linear projections of Orange County population through 2050 with different base periods**



For Orange County, the projections for 2050 range from 196,302 to 214,200—a difference of just 18,000 between the highest and lowest future scenario. (However, the 2037 linear projections average nearly 10,000 people higher than the cohort-component projection from NC OSBM.)

**Linear projections of Chapel Hill population through 2050 with different base periods**



In Chapel Hill, however, the projections for 2050 vary substantially depending on which base period is used to inform the estimates of annual average change. Using the growth observed last decade (2000-2010), Chapel Hill is projected to surpass 102,000 residents by 2050. However, using observed recent growth (2010-2017), the 2050 population is projected to be 30,500 residents lower, with just under 72,000 people in 2050.

**How to understand projections?**

When evaluating population projections, pay attention to:

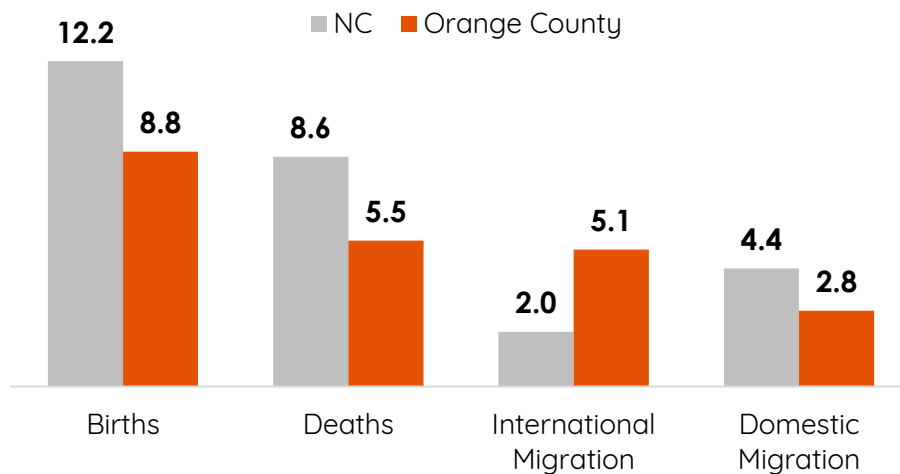
- How was it produced? What were the method and assumptions used?
- What were the input data and what was the source of these data?
- What was the base period? And do we have reason to believe that the future may differ significantly from the past?
- What could happen that would alter the projected trajectory?

When possible, examine multiple projections to better understand a range of possibilities.

## Components of Population Change

Population can grow in one of two ways: if there are more births than deaths (natural increase) or if more people move in than out (net in-migration). Most population growth in both North Carolina and Orange County is from net in-migration. Between 2010 and 2017, nearly 8,000 new residents were added to Orange County from net in-migration, accounting for 71% of the county's total population growth. Just over 3,300 new residents were added due to natural increase, with a total of 8,872 births and 5,565 deaths occurring in Orange over this time.

**Average Annual Rates of Vital Events, NC vs. Orange, 2010-17**



Compared to state average annual rate of events (per 1,000 residents), Orange County has:

- lower birth rates (8.8 vs. 12.2), reflecting high presence of college students in the population traditionally of childbearing age. Birth rates for both NC and Orange have been declining over this time, reflecting combined impact of population aging and steady declines in fertility. NC's birth rate was 12.6 per 1,000 residents for 2011 compared to 11.8 in 2017. In Orange, the birth rates declined from 9.2 in 2011 to 8.3 in 2017. Numerically, there were 44 fewer births in Orange County during 2016-17 than 2010-11.
- lower death rates (5.5 vs. 8.6), reflecting both the relative youth of the population as well as lower mortality rates associated with more educated residents. While death rates have generally been stable in Orange, death rates have increased slightly statewide, reflecting the broader impact of population aging and a larger group of people at older ages with higher mortality.
- higher rates of international migration (5.1 vs. 2.0), reflecting the influence of UNC-Chapel Hill, specifically, the arrival of international students and/or return of domestic students from studying abroad. While international migration is down statewide from its earlier peak, international migration into Orange County increased steadily from 2010 through 2014 and has consistently been estimated at 780-790 individuals each year since 2014.

- Lower rates of domestic migration (2.8 vs. 4.4), reflecting the heavy in-flows/out-flows of residents common in a college town. College-centered communities frequently pull in large numbers of young adults, but many of these young adults leave once they finish their degrees, causing net migration to be relatively flat. Statewide, population growth has been fueled by rebounding domestic migration. In Orange, year-to-year patterns are significantly more volatile; there is not a consistent pattern from 2010-2017 and annual volatility cannot be explained by enrollment trends at UNC.

### Net Migration vs. Total Migration Flows

Net migration is the total number of movers into an area minus the total number of movers out of an area. While this number tells us the total population gain (or loss) from migration, it does not represent the full picture of who is interacting with a community in a year.

In Orange County, IRS tax filings for tax years 2014-2015, for example, indicate a net migration of 98 people. But this negligible net migration is a total movement of 13,364 people: 6,731 moved into Orange and 6,633 moved out of Orange. **The total migration flow is 136 times larger than the net migration gain.**

Many county residents are relatively new arrivals. According to the 2016 5-Year American Community Survey, 14% of county residents had moved to Orange in the past year from another county, state, or country. In Chapel Hill, 21% of residents had recently moved from outside of Orange County and 12% had relocated to Chapel Hill from another place within Orange.

## Changing Demographic Characteristics

### Sex

North Carolina's population was 51% female and 49% male in 2016. Females comprised a larger share of the local population in both Chapel Hill (54%) and Orange County (52%) more broadly. This may reflect the relatively higher enrollment of women in postsecondary institutions such as UNC-Chapel Hill.

### Race/Ethnicity<sup>1</sup>

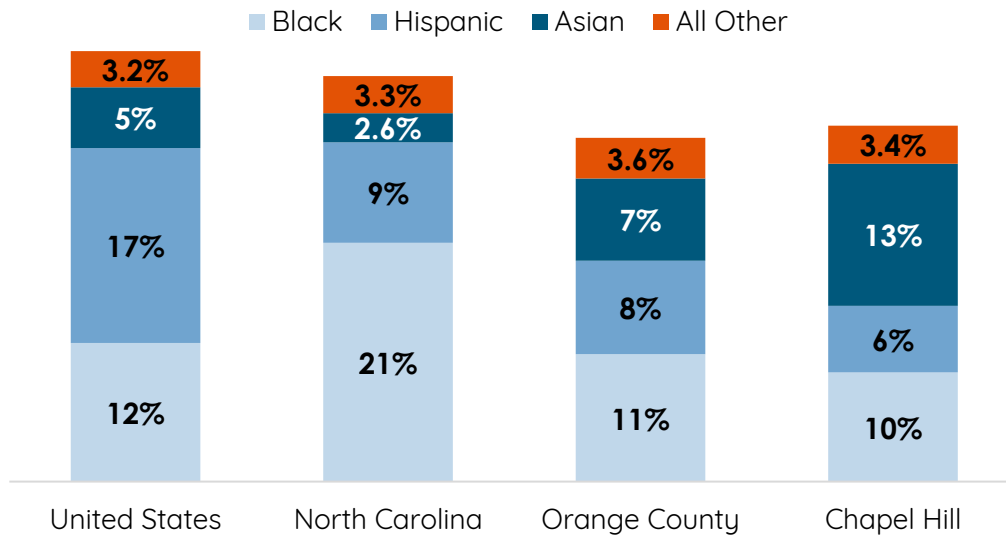
North Carolina's population is increasingly diverse, with large, and fast-growing Hispanic and Asian populations. Orange County and Chapel Hill have a unique racial/ethnic composition when compared to the state in the 2016 5-Year American Community Survey:

- Both Orange (70%) and Chapel Hill (70%) had a higher share of white residents compared to the state (64%) and the nation more broadly (62%).

<sup>1</sup> For clarity and concision, we have combined race and ethnicity. Hispanic individuals can be of any race. All racial groups refer to non-Hispanic individuals.

- Black residents made up 21% of the state’s population in 2016, nine percentage points higher than the national rate (12%). Black residents were 11% of the population in Orange County and 10% in Chapel Hill.
- Hispanics made up a smaller share of Chapel Hill’s population (6%) compared to both Orange (8%) and NC statewide (9%). Nationally, Hispanics were 17% of the population in 2016.

### Minority Population Composition, 2016 5-Year ACS

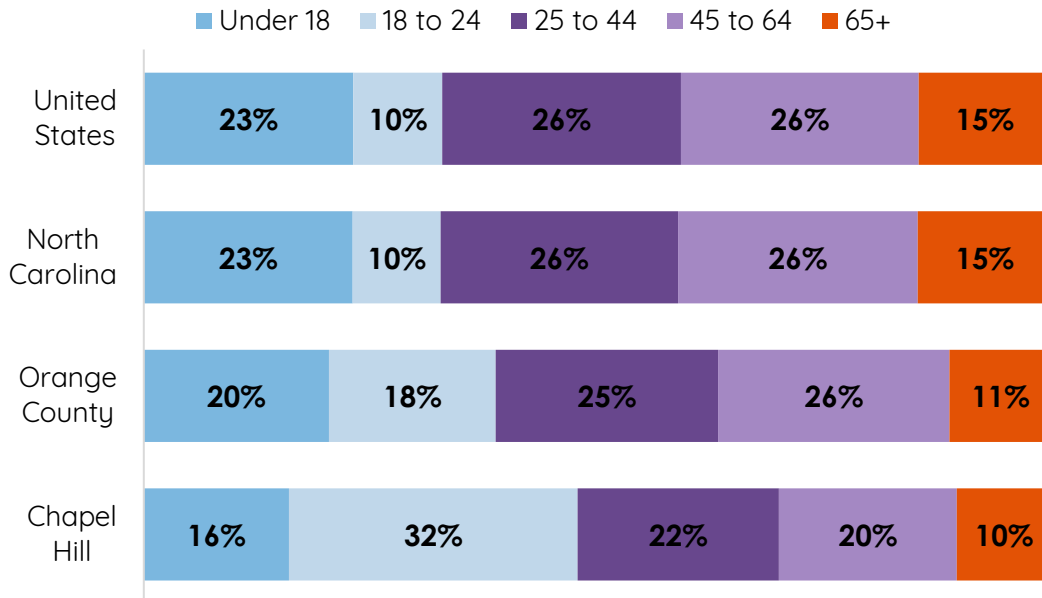


- The Asian population share was much larger in Chapel Hill (13%) and Orange (7%) than NC (2.6%) and the nation (5%).
- The “All Other” group includes individuals who identify as American Indian, other race, and multiracial. While the share in this category is similar for all geographic areas shown here, North Carolina has a higher share of American Indian residents while Orange and Chapel Hill reported higher shares of multiracial residents.

### Age

The presence of UNC-Chapel Hill, a large research institution, has significant impacts on the age structure of both Chapel Hill and Orange. Nearly one in three residents (32%) in Chapel Hill in the 2016 ACS data were ages 18-24 compared to 10% statewide. This high share influences the county’s broader age structure, as well: 18% of all Orange County residents were age 18-24, nearly twice the statewide share. In contrast, children (under 18) and older adults (65+) are a smaller share of local populations than they are in North Carolina more broadly. Prime working-age residents, adults 25 to 64, are also a smaller share of Chapel Hill’s population: 42% compared to 51% in the county overall and 52% statewide.

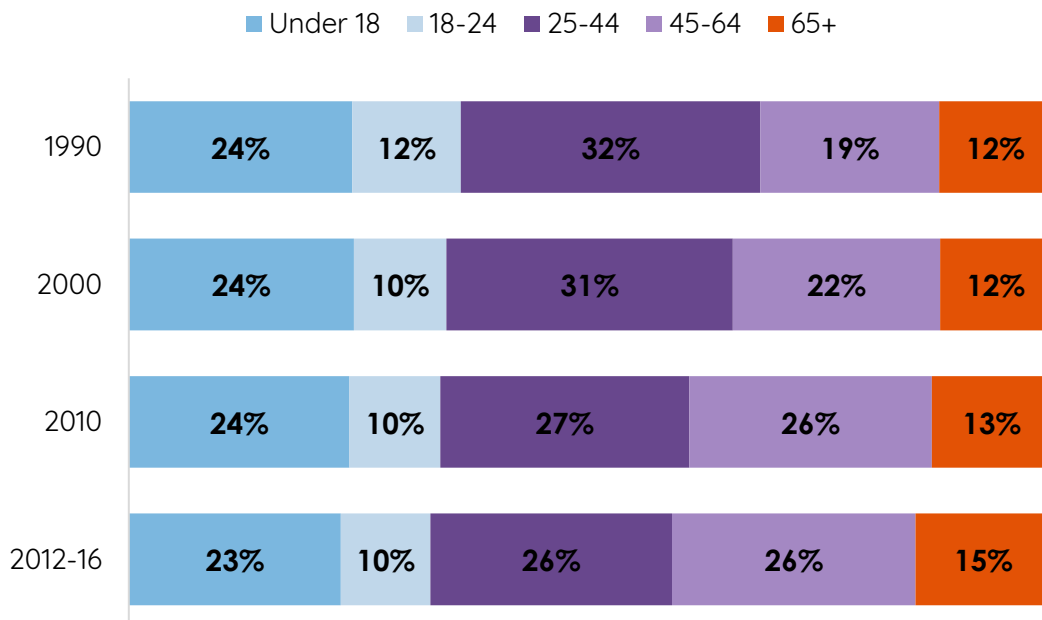
### Age Structure, 2016 5-Year ACS



### Age Structure Change, 1990-2016

Statewide, the biggest change in the age structure since 1990 has been the steady aging of the Baby Boomers. In 1990, the Baby Boomers were all in the 25-44 age group. Over the next 20 years, this age group slowly declined as a share of total population while the share of the next age group—45 to 64—steadily increased. By 2010, the Baby Boomers were in the 45-64 age category.

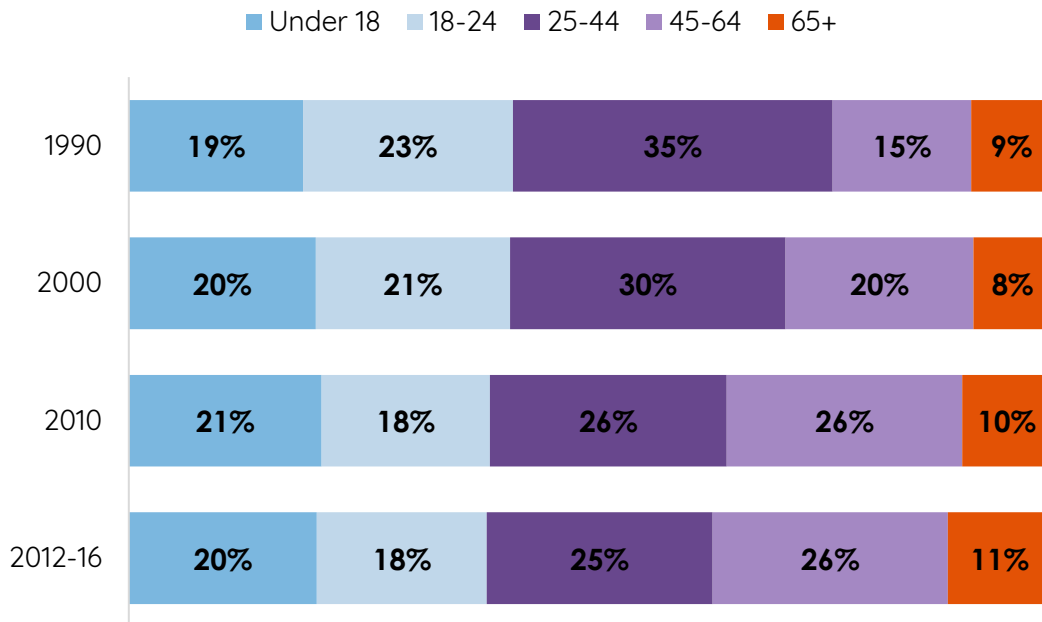
### NC Age Age Structure, 1990-2016



As the Baby Boomers continue to age, we will see their impact in the steadily rising share of the 65+ population. This is already evident in the 2012-16 ACS estimates: 15% of the state’s population is ages 65+, an increase of two percentage points from 2010.

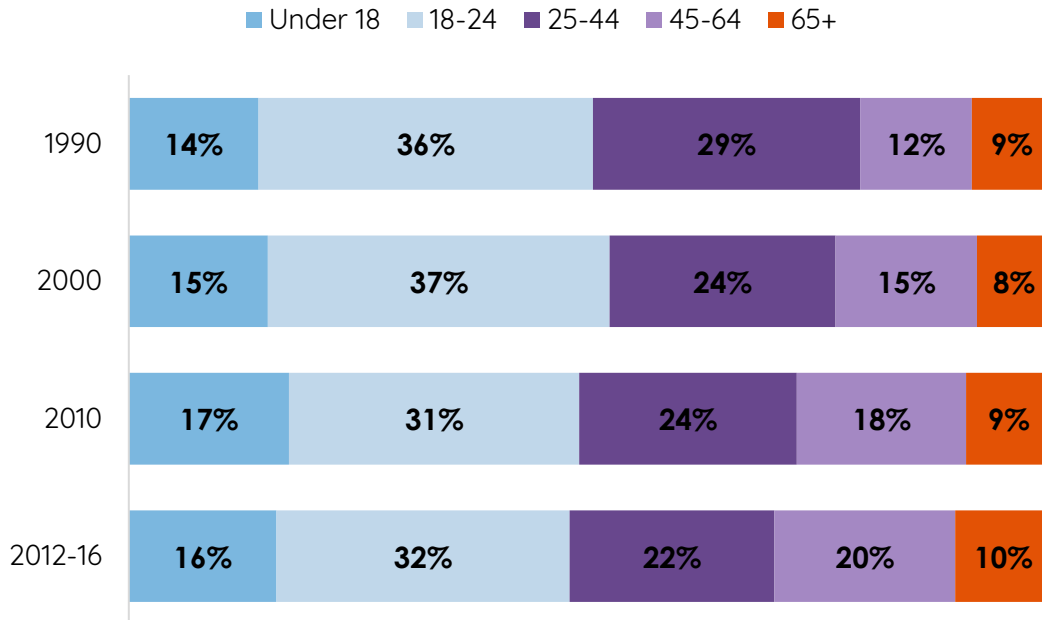
Orange County had similar trends, with even larger shifts between the 25-44 and 45-64 population. In 1990, more than one in three residents were 25-44 (35%) and 15% were 45-64. In the most recent data, the 25-44 year-olds comprise 25% of the population, a 10 percentage point decrease from 1990. The 45-64 year-old share increased 11 percentage points over this time, rising from 15% to 26%.

### Orange County Age Structure, 1990-2016



In Chapel Hill, children gained as a share of population (as they did in Orange County more broadly) while the 18-24-year-old population declined as a share of total population from 36% to 32%. Chapel Hill also saw the 25-44 year-old population decline as a share of total population with increases in the share of 45-64 year-olds, though this shift was not as pronounced as in the county more broadly.

### Chapel Hill Age Structure, 1990-2016



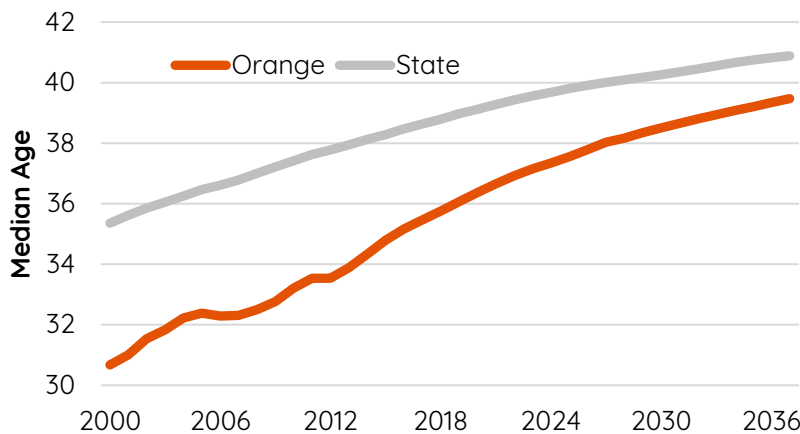
#### Looking to the future...

Orange County’s median age was 30.7 in 2000 – meaning half of all county residents were younger than 30.7 and half were older than 30.7 years old. The state median age of 35.4 was 4.7 years older than Orange County’s median age.

Although Orange County has long been much younger than the state—largely due to the presence of UNC—the Office of State Budget and Management predicts that the gap between the county’s median age and that of the state will steadily narrow through 2037.

Between 2000 and 2010, this gap narrowed slightly to 4.2 years. Both Orange County and the state saw increases in their median ages to 33.2 and 37.4, respectively.

#### Median Age, Orange vs. NC, 2000-2037



Source: NC OSBM

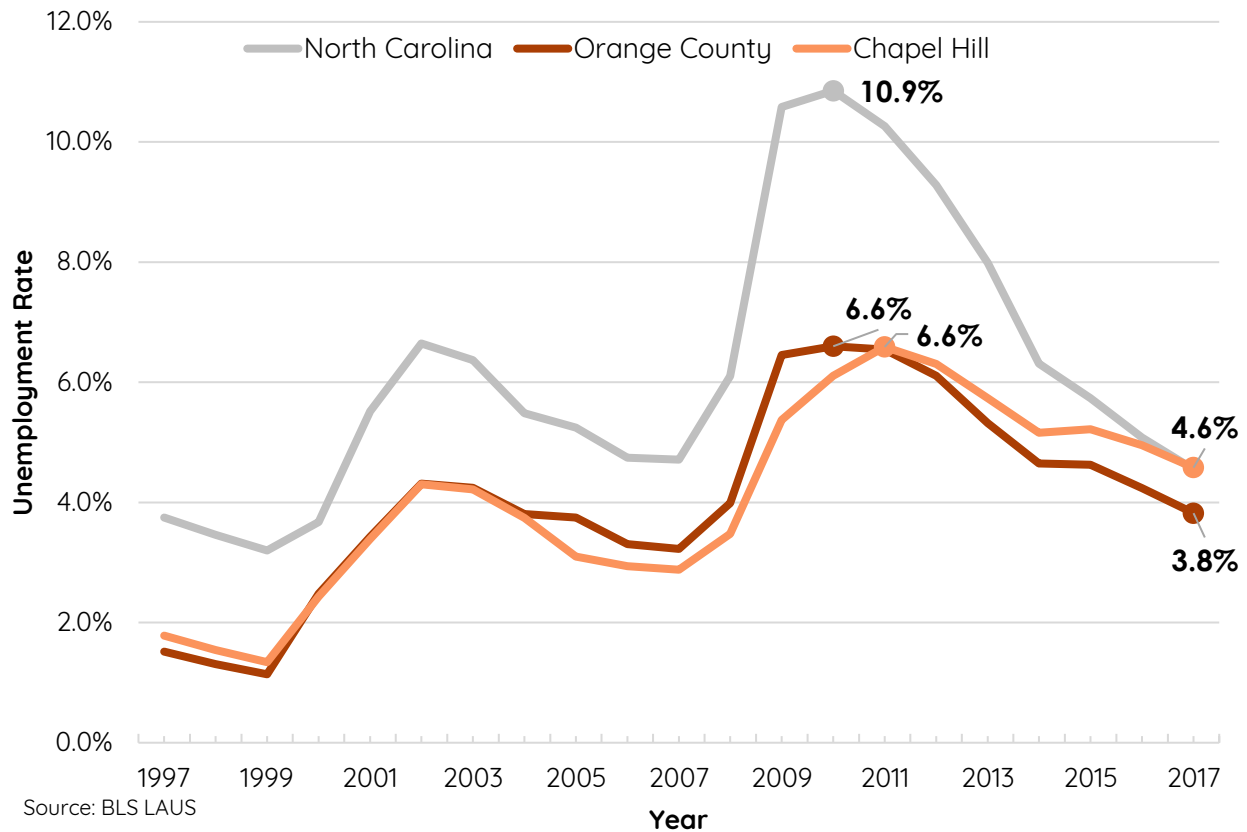
The first Baby Boomer turned 65 on January 1, 2011. As this large generation ages into the 65 and over category, the state’s median age is projected to steadily rise. By 2037, the statewide median age is projected to be 40.9. In Orange, the median age is projected to be 39.5, just 1.4 years less than the state.



# ECONOMY & WORKFORCE

## Unemployment Rates

**Annual Unemployment Rate (Unadjusted), 1997-2017**



Historically, area unemployment rates have been lower than the state average and relatively buffered from economic downturns. Between 1997 and the early 2000s, unemployment in both Chapel Hill and Orange County more broadly was, on average, two percentage points below the state. As state unemployment rates climbed to 10.9% in 2010, local unemployment rates also spiked, but to substantially lower levels. Unemployment rates peaked at 6.6% in Orange County in 2010 and 6.6% in Chapel Hill in 2011.

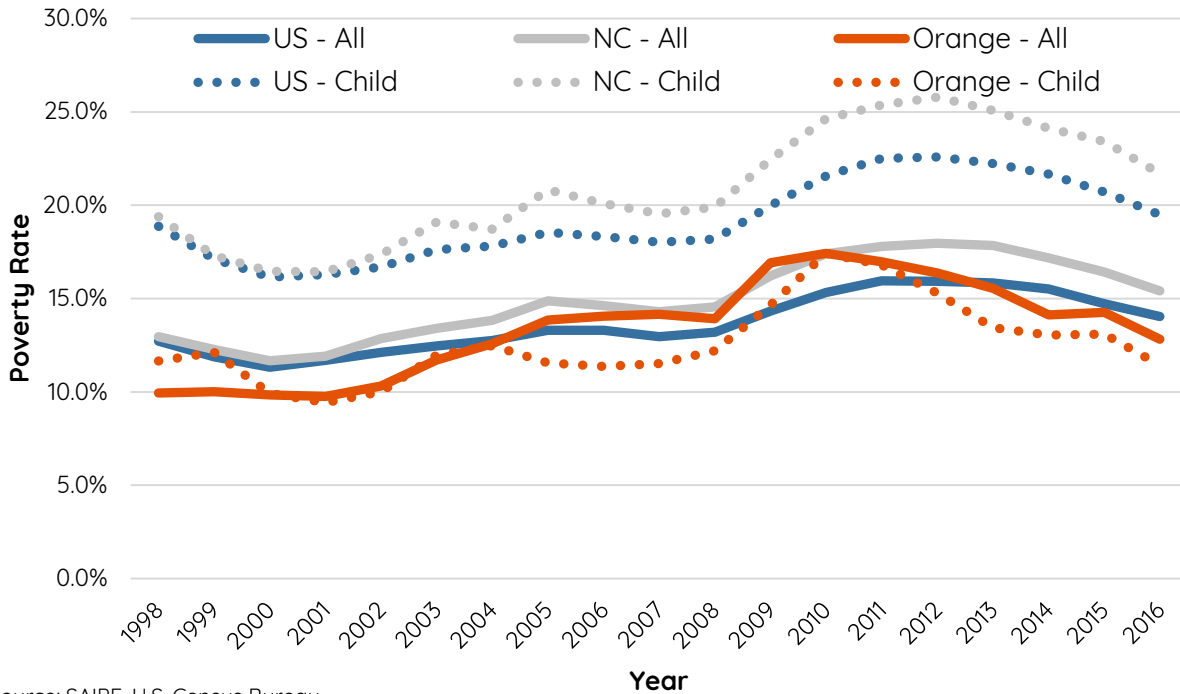
Statewide, unemployment rates have returned to their pre-recession levels (4.6% in 2017 vs. 4.7% in 2007) but Orange County and Chapel Hill have not yet fully recovered.

- Orange County’s unemployment rate of 3.8% in 2017 is 0.6 percentage points higher than its 3.2% unemployment rate in 2007.
- Chapel Hill’s unemployment rate of 4.6% in 2017 is 1.7 percentage points higher than its 2.9% unemployment rate in 2007.

Chapel Hill’s unemployment rate has remained higher than the broader county rate since 2011. In 2017, the town’s unemployment rate matched the state rate for the first time in 20 years.

## Poverty Rates

**Poverty rates for all ages and children under 18, 1998-2016**



Source: SAIPE, U.S. Census Bureau

Like the unemployment rate, Orange County poverty rates have also typically been below the statewide average, with one exception: in 2009, Orange County poverty rates were estimated to be 16.9% compared to the state’s 16.2% rate. Since then, Orange County’s rate has steadily declined at a faster pace than the state. In 2016, Orange County’s poverty rate was estimated at 12.8%, lower than both NC (15.4%) and the nation (14%).

For most places, the child population is significantly more likely to be in poverty than the all ages population. In 2016:

- the nationwide child poverty rate was 19.5% compared to a 14.0% poverty rate for all ages.
- the statewide child poverty rate was 21.7%, 6.3 percentage points higher than the all ages poverty rate (15.4%).
- the Orange County child poverty rate was 1.4 percentage points lower than the all ages poverty rate: 11.4% versus 12.8%.

This pattern underscores the impact of UNC students in Orange County’s overall poverty rates, as discussed below.

### UNC students distort local income statistics

With nearly 29,500 students enrolled in Fall 2016, UNC-Chapel Hill is the 2<sup>nd</sup> largest school in the University of North Carolina System. UNC’s fall enrollments were equal to 21% of Orange County’s population in 2016.

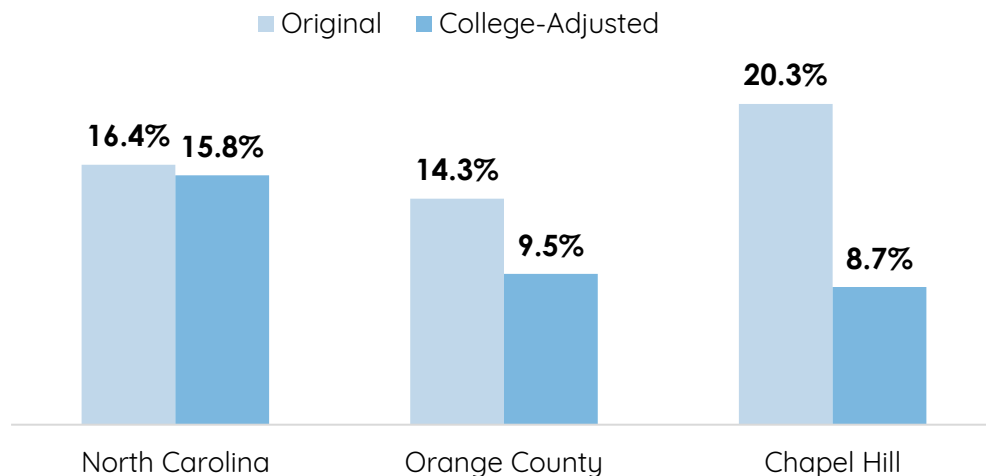
The presence of a large student population distorts local income statistics due to the large number of individuals with artificially low incomes. Many students are not working or are working part-time by choice. They may have financial support from their parents or they may be financing expenses through loans and credit card debt, but this purchasing power is not readily captured in income statistics. Accounting for the high proportion of students in the area provides more realistic estimates of local economic conditions.

For individuals aged 3 and older:

- Chapel Hill’s college-adjusted poverty rate is 8.7%, a decline of 11.6 percentage points from the original, non-adjusted rate.
- Orange’s college student-adjusted poverty rate is 9.5%, a decline of 4.8 percentage points from the non-adjusted rate.

### Large impact of college students on local poverty rates

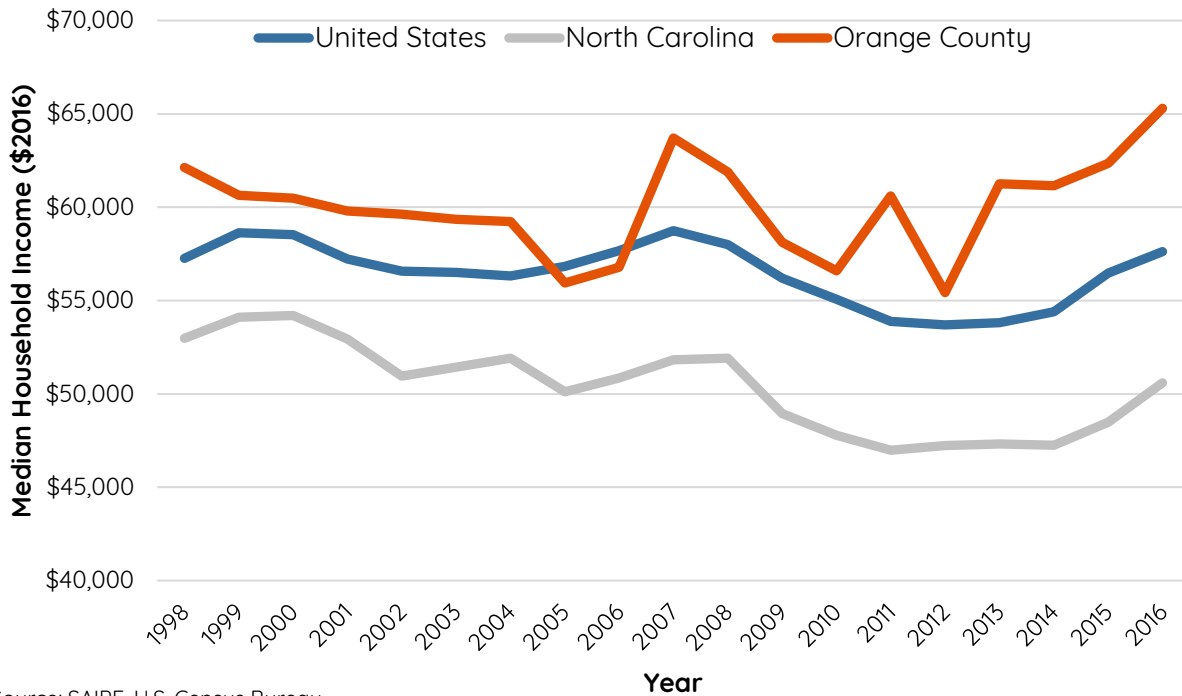
Poverty rate (ages 3+) with and without college students, 2012-16



Source: 5-Year American Community Survey

## Median Income

### Median Household Income (\$2016), 1998-2016



Source: SAIPE, U.S. Census Bureau

Compared to the U.S. and North Carolina, Orange County has much higher median household income. The chart above displays median household income for 1998 through 2016 with historical values adjusted for inflation to show constant \$2016.

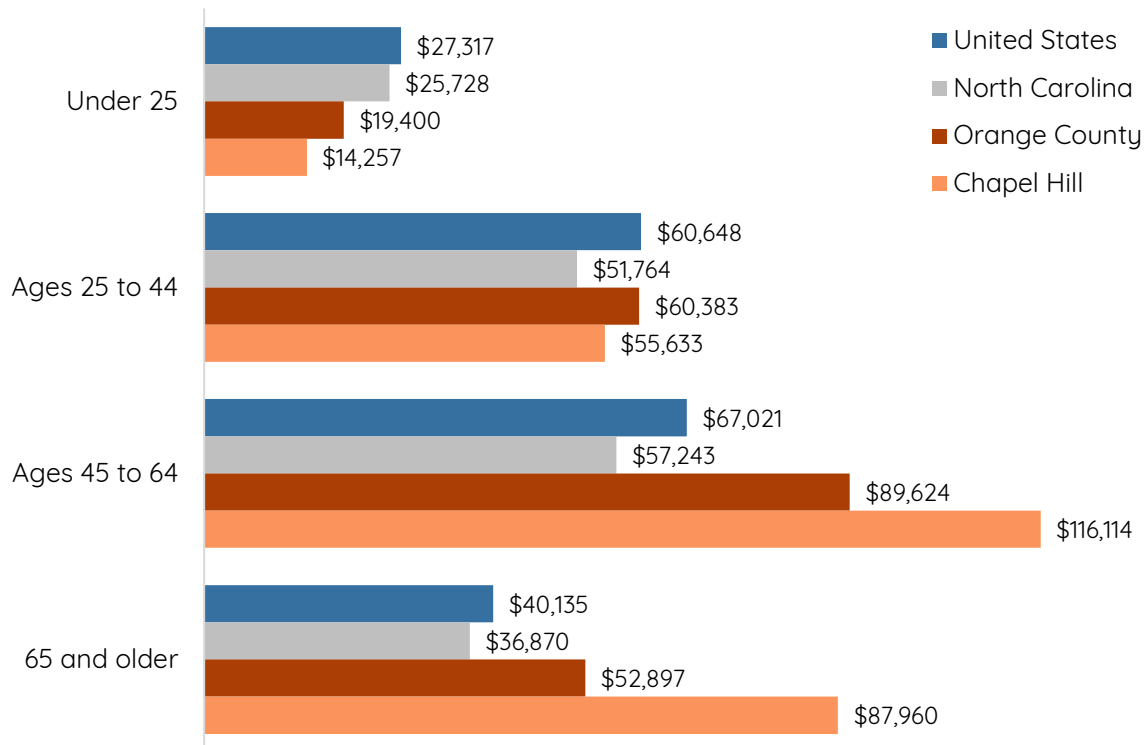
All three areas saw median household income dip following the Great Recession. While Orange County’s 2016 median household income surpassed its pre-recession high (\$65,299 vs. \$63,708), both the state and the country have yet to fully recover to earlier peaks. While North Carolina’s median household income has been on the upswing in recent years, state median income peaked in 2000 (\$54,201 vs. \$46,984 in 2016).

Within the county, there are significant differences in median income by age, as shown in the table below, largely driven by the student population.

In general, young adults (under 25) have lower incomes than older working-age adults (45 to 64), largely because young adults are more likely than older to be in school or working part-time than older adults. Among those who are working, they are early in their career and are earning lower wages.

Across the United States, the median household income for households headed by individuals under 25 was \$27,317, nearly \$40,000 less than the median household income of households headed by adults aged 45 to 64 (\$67,021). This gap is smaller in North Carolina (\$31,500) but still large.

**Median Household Income (\$2016) by Age of Householder, 2012-2016**



Source: 2016 5-Year American Community Survey

In Orange County and Chapel Hill, the large number of students leads to very low household incomes for those under 25. Meanwhile, older adults—particularly those over age 45—report very high incomes:

- In Orange County, the median household income for those under age 25 was \$19,400, more than \$70,000 less than the median household income for households headed by adults aged 45 to 64 (\$89,624).
- In Chapel Hill, the median household income gap was even wider. Households headed by individuals under 25 had median incomes of \$14,257, more than \$100,000 less than the median incomes of 45-64-year-old households (\$116,114).

**Use median family income to account for college students**

The low incomes of college students distort median household income figures just as they distort poverty rates. Median family income focuses only on individuals who are living in family households and will exclude most students. While the state median family income was \$57,667, Orange’s was higher (\$88,887) and Chapel Hill’s was even higher (\$115,538).

Source: 2012-2016 5-Year American Community Survey

## Occupations and Employers

### Top 5 Occupations by Employment, Orange County 2017

	Employment	Average Wage	Wage Rank (of 21)
<b>Total All occupations</b>	<b>69,460</b>	<b>\$27.87</b>	
Education, Training, and Library Occupations	11,690	\$44.12	2
Office and Administrative Support Occupations	9,910	\$17.94	14
Healthcare Practitioners and Technical Occupations	8,080	\$32.67	6
Food Preparation and Serving Related Occupations	5,870	\$11.30	21
Sales and Related Occupations	4,370	\$19.41	11

Source: OES BLS

There were 69,460 jobs in Orange County in 2017. The largest number of jobs—11,690 or 17%—were Education, Training, and Library Occupations, reflecting the impact of UNC-Chapel Hill. These jobs were also among the highest paid. With an average hourly wage of \$44.12, individuals employed in these occupations earned the second highest wages of any occupational group in the county.

The 4<sup>th</sup> largest occupation of employment—Food Preparation and Serving Related Occupations—was the lowest paid occupational group in 2017. The average hourly wage for these workers was \$11.30.

### Orange County Major Employers 2017 Q4

<b>1</b>	UNC Chapel Hill	<b>14</b>	Food Lion
<b>2</b>	UNC Health Care System	<b>15</b>	The Chapel Hill Residential
<b>3</b>	Chapel Hill-Carrboro City Schools	<b>16</b>	United Parcel Service
<b>4</b>	Orange County Schools	<b>17</b>	PHE Inc
<b>5</b>	UNC Physicians Network	<b>18</b>	Summit Consulting-Engineering
<b>6</b>	Local Government	<b>19</b>	Weaver Street Market
<b>7</b>	Town Of Chapel Hill	<b>20</b>	Performance BMW
<b>8</b>	Eurosport	<b>22</b>	Wellspring Grocery
<b>9</b>	General Electric Company	<b>22</b>	Residential Services Inc
<b>10</b>	Aramark Food And Support Services	<b>24</b>	US Postal Service
<b>11</b>	Wal-Mart	<b>24</b>	Carolina Inn
<b>12</b>	Harris Teeter	<b>25</b>	The Arc Of The Triangle
<b>13</b>	AKG of America		

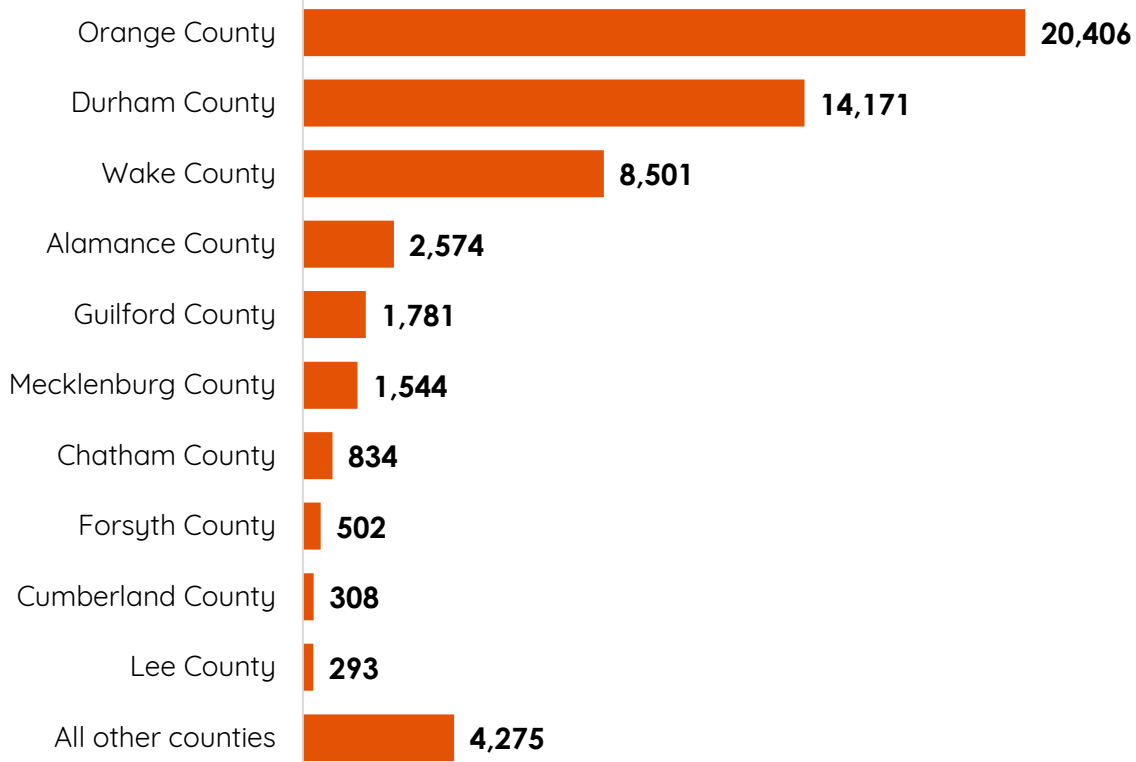
Source: QCEW

Examining the list of the 25 largest employers in the county further highlights the impact of state and local government: UNC or local school districts comprise the top 5 employers while local government and the Town of Chapel Hill are the 6<sup>th</sup> and 7<sup>th</sup> largest employers, respectively.

## Commuting

### Where Orange County workers work

Place of primary job for individuals who lived in Orange County in 2015



Source: LODES

Most Orange County workers are commuting to work in Orange or a neighboring county. Among Orange County's 55,189 residents employed in 2015:

- 20,406 or 37% worked in Orange County;
- 14,171 or 26% worked in Durham County;
- 8,501 or 15% worked in Wake County; and
- 2,574 or 5% worked in Alamance County.

In total, 83% of Orange County's residents worked in one of these four counties.

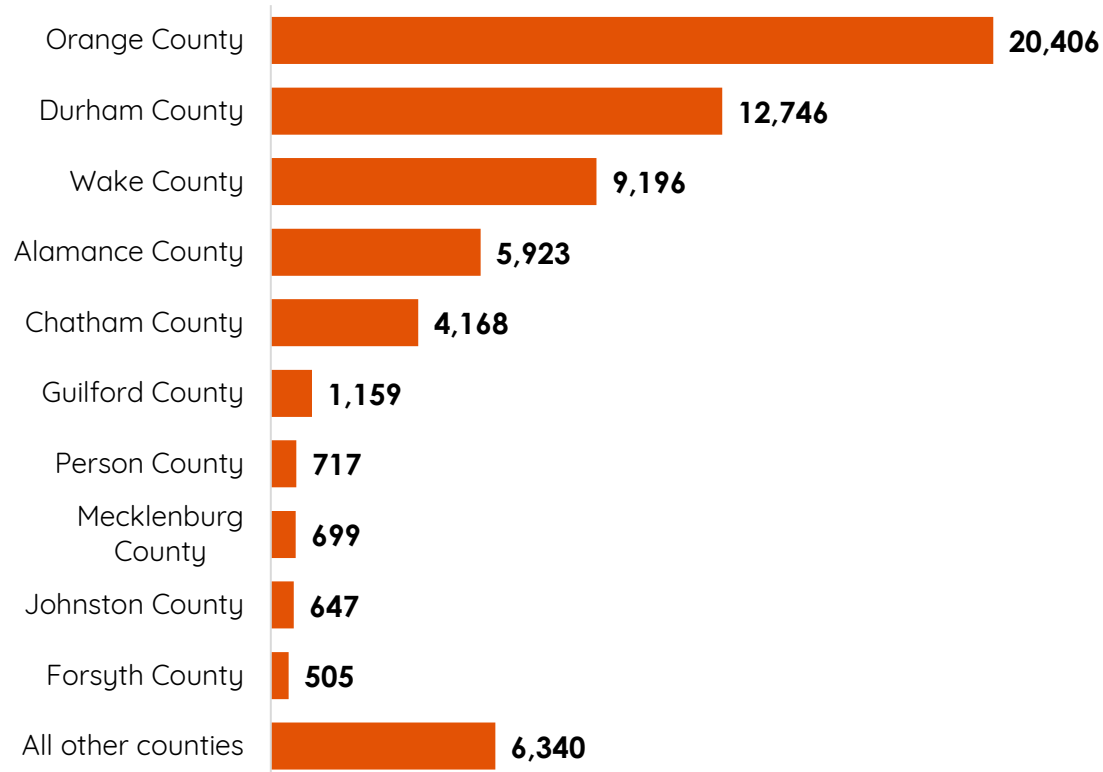
These counties are also the primary source for the workers filling the 62,506 jobs in Orange County in 2015:

- 20,406 or 33% of county jobs were filled by county residents;
- 12,746 or 20% of county jobs were filled by Durham County residents;
- 9,196 or 15% of jobs were filled by Wake County residents; and
- 5,923 or 10% of jobs were filled by Alamance County residents.

Another 4,168 or 7% of Orange County workers live in Alamance County.

### Where people commute from to fill Orange County jobs

Place of residence job for individuals whose primary job was in Orange County in 2015



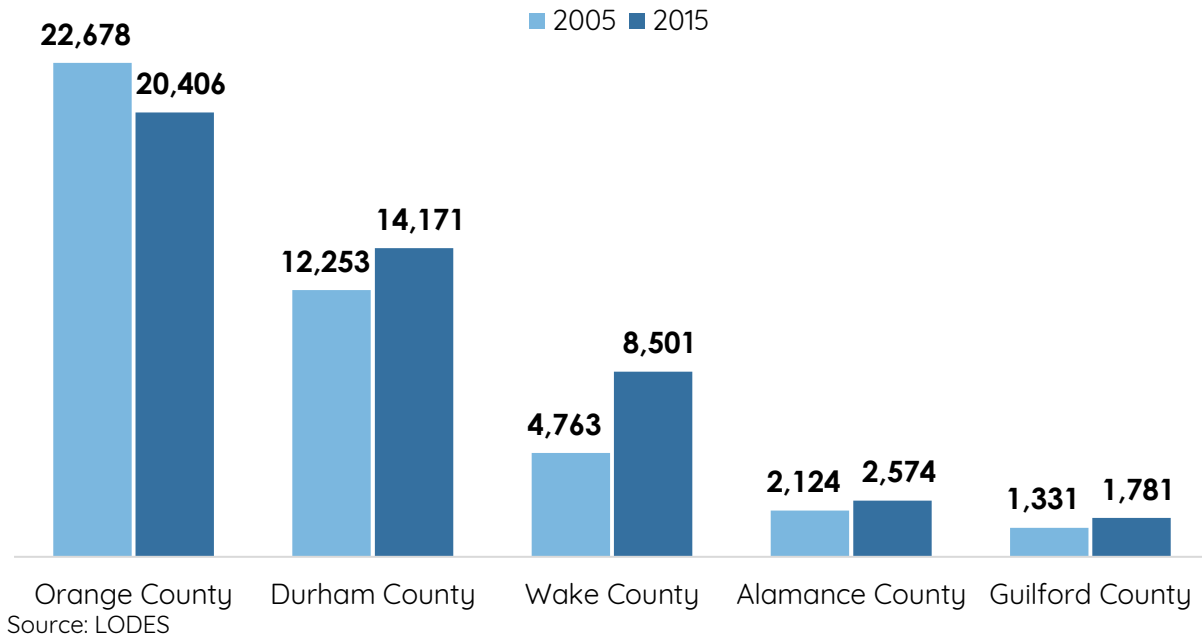
Source: LODES

More workers are crossing county lines to go to work. Between 2005 and 2015, the number of individual workers living in Orange County increased by 5,339 or 10%—and the number of jobs in Orange County increased 16,302 or 11%—but the number of individuals living and working in Orange declined 2,272 or nearly 10%. Meanwhile, the number of individuals commuting to adjacent counties increased. The largest increase was among Orange County residents working in Wake County. In 2005, 4,763 individuals who lived in Orange County were working in Wake; this had increased by nearly 3,700 persons to 8,501 in 2015.



**5,339 more workers in Orange in 2015 but 2,272 fewer working in the county**

Place of primary job for individuals who lived in Orange County in 2015



**Chapel Hill commuting shows similar patterns to Orange**

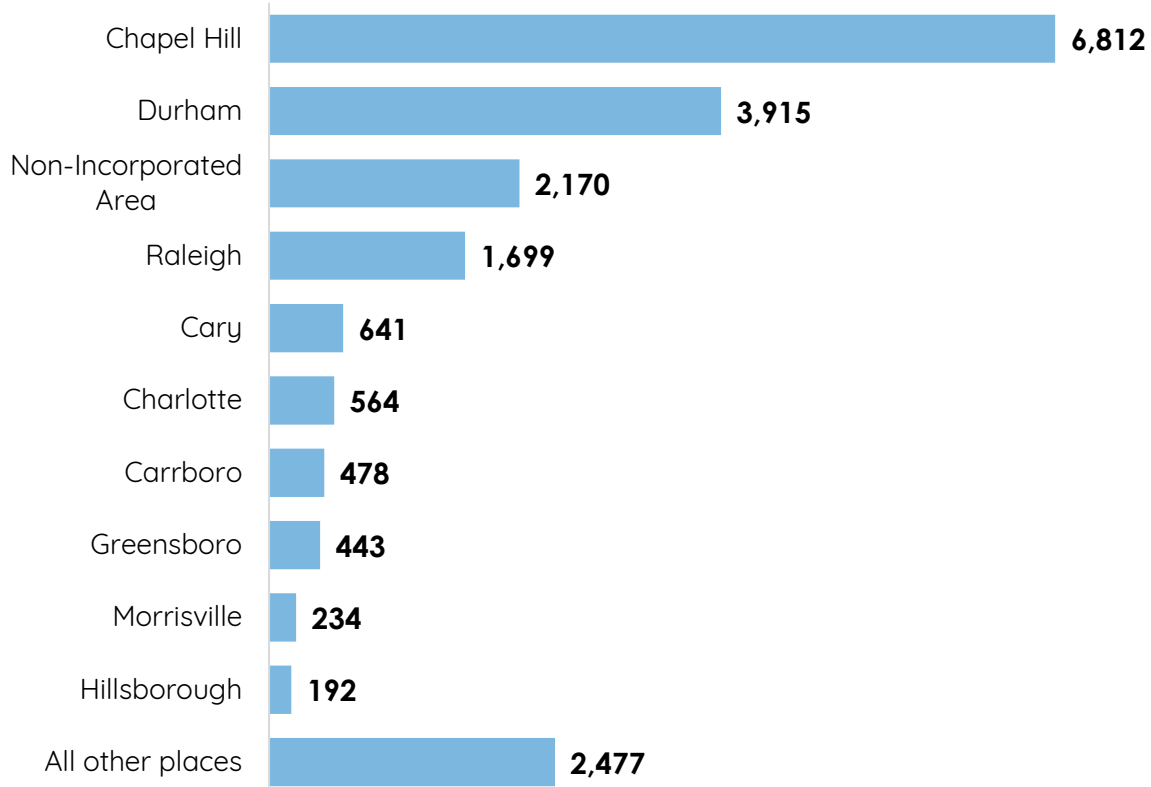
Examining destinations for the 19,625 individual workers who lived in Chapel Hill in 2015 reveals similar patterns to those exhibited countywide:

- 35% or 6,812 live and work in Chapel Hill;
- 3,915 or 20% work in Durham; and
- 2,574 or 13% work in Raleigh, Cary, or Morrisville (three Wake County municipalities among the top 10 destinations).

While most Chapel Hill workers are commuting to another municipality, 2,170 or 11% work outside of an incorporated municipality.

### Where Chapel Hill workers work

Place of primary job for individuals who lived in Chapel Hill in 2015

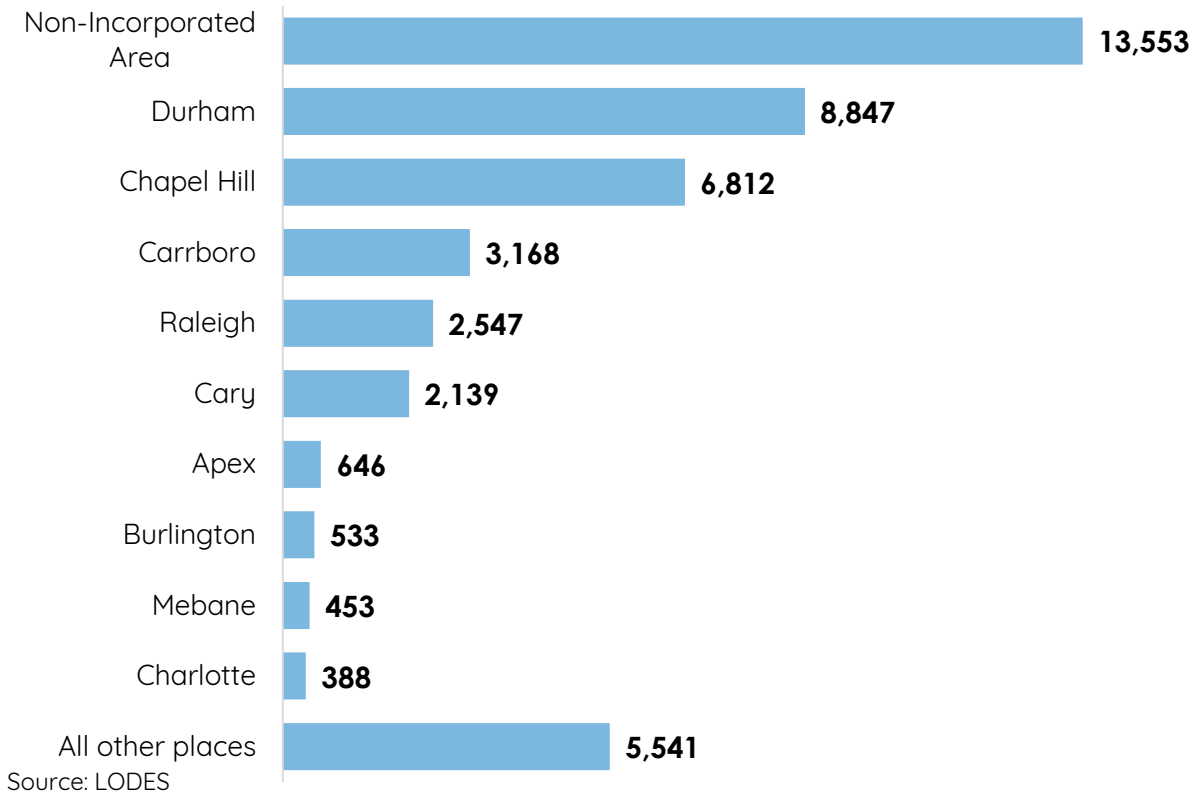


Source: LODES

In contrast, the largest share of the 44,627 individuals working in Chapel Hill—13,553 or 30%—commute to the town from a non-incorporated area. After this group, Durham residents comprise the largest number of town workers (8,847 or 20%), though more local workers come from Chapel Hill and Carrboro combined (9,980 or 22%). Three Wake County municipalities—Raleigh, Cary, and Apex—are in the top 10 sending places, accounting for 4,332 or 12% of town workers.

### Where people commute from to fill Chapel Hill jobs

Place of residence job for individuals whose primary job was in Chapel Hill in 2015



### Commuter Impact on Local Population

Both Chapel Hill and Orange County have more jobs than they have resident workers to fill those jobs. As a result, more people commute into the area to work than are leaving. One way to estimate the impact of commuters on local populations is to estimate the **daytime population** by adjusting for the net population change from commuting. In 2015, the commuter impact was significant:

- Orange County had 7,317 net in-commuters. The estimated daytime population (148,880) was 5% larger than the county’s base population.
- Chapel Hill had 25,002 net in-commuters. The estimated daytime population (84,119) was 42% larger than the town’s base population.

#### Daytime Population Estimate, 2015

Worker Inflows/Outflows	Orange County	Chapel Hill
Base Population (2015)	141,563	59,117
Workers		
Live and Work	20,406	6,812
Drive In	42,100	37,815
Drive Out	34,783	12,813
Net Commuters (In - Out)	7,317	25,002
<b>Daytime Population (Base + Net Commuters)</b>	<b>148,880</b>	<b>84,119</b>
Percent Increase	5%	42%

Source: LODES

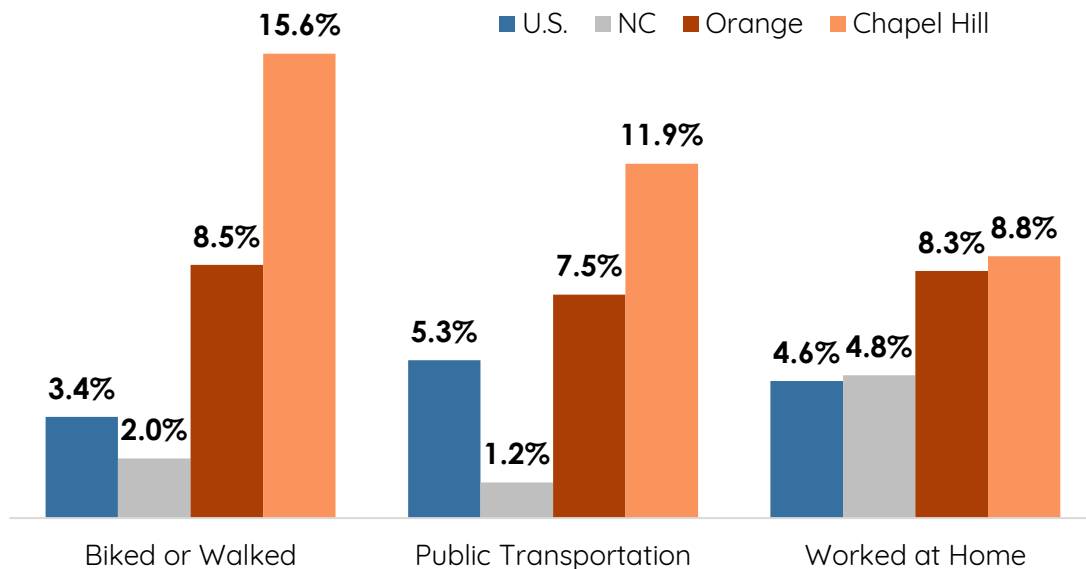
**High rates of non-car commuting among local workers**

Not all individuals who live outside of the place they work are commuting by car. Compared to both the state and the nation, Orange County and Chapel Hill have much higher rates of non-car commuting:

- 8.5% of Orange County workers and 15.6% of Chapel Hill workers reported biking or walking to work, significantly higher than the NC (2.0%) and U.S. (3.4%) rates and reflective of the relatively high population density.
- 7.5% of Orange County workers and 11.9% of Chapel Hill workers reported taking public transportation to work, higher than the NC (1.2%) and U.S. (5.3%) rates and reflective of the local transportation networks (e.g., Chapel Hill bus lines, Triangle Transit).
- Orange County (8.3%) and Chapel Hill (8.8%) workers were nearly twice as likely to report teleworking (working remotely) as NC (4.8%) and U.S. (4.6%) workers. The area’s highly educated population may be more likely to be in occupations and industries conducive to teleworking.

**High rates of non-car commuting among local workers**

Means of transportation to work, 2012-16



Source: 5-Year American Community Survey