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# COVID-19 and NORTH CAROLINA'S SHIFTING DEMOGRAPHY

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# COVID-19 and North Carolina's Shifting Demography


## Abstract

Post 2020 Census population estimates covering the first fifteen months of the pandemic are analyzed. The results reveal COVID-19's impact on the geo-demography of the state, highlight disturbing demographic trends, and raise pressing questions requiring immediate policy attention if North Carolina is to remain attractive as a place to live, work, play, and do business.


## Introduction

North Carolina's population grew more rapidly than the population of the U.S. during the first 15 months of the pandemic (1.1% vs. 0.1%) according to estimates of residential population change and components of change released by the U.S. Census Bureau for the period April 1, 2020 to July 1, 2021 (U.S. Census Bureau, Population Division, 2021, 2022). We use these post-2020 Census population estimates in this essay first, to highlight COVID-19's impact on the geo-demography of our state; and second, to highlight several disturbing trends and pressing questions that require the immediate attention of state and local community leaders (Johnson, 2020, 2021a; Johnson, Bonds, & Parnell, 2021a,b).

## COVID and the Recent Population Boom

Continuing a trend dating back to the 1990s, net migration drove growth in the initial phase of the pandemic—more people moving to North Carolina relative to those leaving. In 2019, prior to the pandemic, newcomers arrived in North Carolina at the net rate of 164 per day from abroad and every other state in the nation. At that time, close to half of North Carolina's net growth was concentrated in two counties, Mecklenburg and Wake (Johnson, 2021b). Cumulatively, ninety five percent of the net growth was concentrated in just fifteen of the state's one hundred counties. The county growth poles were mainly centers of government, commerce, and research and development along the I-40/I-85 corridor (Wake, Durham, Guilford, Forsyth, and Mecklenburg) and amenity rich communities on the coast (New Hanover and Brunswick), in the mountains (Buncombe), and within commuting distance of the major centers of business, higher education, health care, and innovation (Johnston, Union, Cabarrus, and Chatham) (Johnson, 2021b).

During the early phase of the pandemic, North Carolina became an even more popular migration destination, with a net gain of 253 newcomers per day, making the state the fourth most popular migration destination in the country behind Florida, Texas, and Arizona (Johnson, 2021a; U.S. Census Bureau, Population Division, 2021). Constrained by regulatory barriers and limited available land for expanded development in the urban cores of Mecklenburg (Charlotte) and Wake (Raleigh) as well as Alamance (Burlington), Buncombe (Asheville), Durham (Durham), Guilford (Greensboro), Forsyth (Winston-Salem), and New Hanover (Wilmington) counties, residential and commercial development intensified in undeveloped areas outside the central city limits in those counties and spilled over into adjacent suburban counties and nearby exurban counties to accommodate this massive in-flow of pandemic refugees (Johnson, 2021b). That is evident in the state's expanded list of twenty-six counties which captured 88 percent of the state's net growth during the first fifteen months of the pandemic (Figure 1).

## Figure 1

North Carolina's Growth Magnets, 2010-2020

| County | | Percent of Growth (Net Growth: 903,965) | | | |
|---|---|---|---|---|---|
| Wake | 228,417 | 47% | | | |
| Mecklenburg | 195,854 | | | | |
| Durham | 57,246 | | 64% | | |
| Guilford | 52,893 | | | | |
| Cabarrus | 47,793 | | | 84% | |
| Johnston | 47,121 | | | | |
| Union | 36,975 | | | | |
| Forsyth | 31,920 | | | | 95% |
| Buncombe | 31,134 | | | | |
| Brunswick | 29,262 | | | | |
| Iredell | 27,256 | | | | |
| Onslow | 26,804 | | | | |
| New Hanover | 23,035 | | | | |
| Gaston | 21,857 | | | | |
| Alamance | 20,284 | | | | |

NC County Growth Poles, April 1, 2010 – July 1, 2021 (NC=111,774)

| | | | | |
|---|---|---|---|---|
| Wake | 20,794 | | | |
| Johnston | 10,505 | | | |
| Brunswick | 7,522 | 50.5% | | |
| Mecklenburg | 6,794 | | | |
| Cabarrus | 5,474 | | | |
| Union | 5,381 | | | |
| Franklin | 3,130 | | | |
| Moore | 3,036 | | 74.2% | |
| Forsyth | 2,933 | | | |
| Gaston | 2,913 | | | |
| Lincoln | 2,860 | | | |
| Pender | 2,612 | | | |
| Alamance | 2,462 | | | 87.8% |
| Harnett | 2,398 | | | |
| Buncombe | 2,082 | | | |
| Pitt | 1,926 | | | |
| Davidson | 1,707 | | | |
| Chatham | 1,607 | | | |
| Onslow | 1,584 | | | |
| Currituck | 1,533 | | | |
| Durham | 1,293 | | | |
| Rowan | 1,275 | | | |
| Catawba | 1,113 | | | |
| Guilford | 1,111 | | | |
| Hoke | 1,032 | | | |
| Randolph | 1,001 | | | |

Source: Johnson (2021b) and U.S. Census Bureau, Population Division (2021).

It also is evident in the total, cumulative, and daily flows of migrants into the state's sixteen major residential real estate markets during the pandemic (Table 1). Twelve of the markets are census defined metropolitan areas (highlighted in green) and three are census defined micropolitan areas (highlighted in red).[1] The markets are rank ordered in the table based on the absolute number of net migrants arriving in the initial phase of the pandemic between April 1, 2020 and July 1, 2021.

### Table 1: Net Migration in North Carolina Major Real Estate Markets, April 1, 2020 – July 1, 2021

| Market | Number of Migrants | Absolute Percent | Cumulative Percent | Migrants/ Per qDay |
|---|---|---|---|---|
| North Carolina | 114,080 | 100.0 | 100.0 | 253 |
| Raleigh | 28,184 | 24.7 | 24.7 | 62 |
| Charlotte | 24,019 | 21.0 | 45.7 | 53 |
| Myrtle Beach (NC part) * | 9,106 | 8.0 | 53.7 | 20 |
| Winston-Salem | 6,962 | 6.1 | 59.8 | 15 |
| Wilmington | 6,861 | 6.0 | 65.8 | 12 |
| Asheville | 6,067 | 5.3 | 71.1 | 13 |
| Durham-Chapel Hill | 3,486 | 3.0 | 74.1 | 8 |
| Pinehurst-Southern Pines | 3,427 | 3.0 | 77.1 | 8 |
| Greensboro-High Point | 3,362 | 2.9 | 80.0 | 7 |
| Hickory-Lenoir-Morganton | 3,070 | 2.7 | 82.7 | 7 |
| Burlington | 2,884 | 2.5 | 85.2 | 6 |
| Fayetteville | 2,363 | 2.1 | 87.3 | 5 |
| Greenville | 1,676 | 1.5 | 88.8 | 4 |
| Virginia Beach (NC part)** | 1,557 | 1.4 | 90.2 | 3 |
| Albemarle | 1,255 | 1.1 | 91.3 | 3 |
| Kill Devil Hill | 1,052 | 0.9 | 92.2 | 2 |

*Brunswick County, NC **Currituck County, NC

Source: U.S. Census Bureau, Population Division, 2021

1 For detailed analyses and discussions of these trends at the national level, see Frey (2021); Kelly (2021); Kolko, Badger, & Bui (2021); McIntosh, Fitzgerald, Zang & Zheng (2021); O'Donnell & Belmonte (2022).

Continuing the pre-pandemic prevailing trend (Johnson & Parnell, 2019; Johnson, 2021), the Raleigh (24.7%) and Charlotte (21.0%) markets together captured close to one half of the net migration (45.7%). An average of sixty-two newcomers arrived in the Raleigh market and fifty-three newcomers arrived in the Charlotte market each day during the first 15 months of the pandemic. Four markets captured between five and eight percent of net migration—Myrtle Beach, SC (the Brunswick County, NC part), Winston-Salem, Asheville, and Wilmington. Between 13 and 20 migrants arrived in these markets each day. A smaller number of migrants—between two and eight—arrived each day in the remaining ten markets, as Table 1 shows.

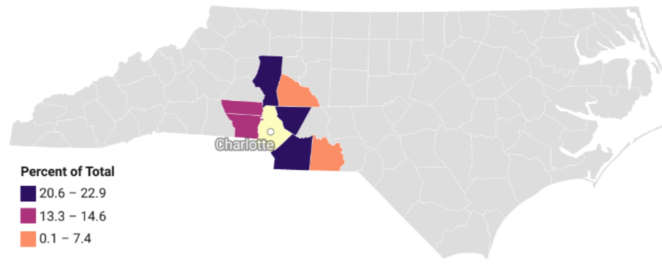
Among the nine multi-county real estate markets, two distinct migration patterns emerged during the early phase of the pandemic. In the Charlotte, Durham, and Fayetteville markets, the dominant pattern was migration-induced suburban growth. In all three markets, the core county—Mecklenburg (-947), Durham (-313), and Cumberland (-1,453) --experienced net outmigration. The surrounding suburban counties captured all of the net migration in each of the markets, as shown in Figure 2.

- In the Charlotte market, Iredell (23%), Union (21%), and Cabarrus (20%) counties each captured about one fifth of the net migration; Gaston and Lincoln captured 15% and 13%, respectively; and Rowan (7%) and Anson (0.4%) captured the balance.
- Net migration concentrated in Chatham (58%) and Granville (33%) counties in the Durham market.
- And in the Fayetteville market, net migration concentrated disproportionately in Harnett County (76%) and the balance in Hoke County (24%).[2]

Figure 2

**Charlotte MSA Net Migration, April 1, 2020-July 1, 2021**

(N= 24,019)

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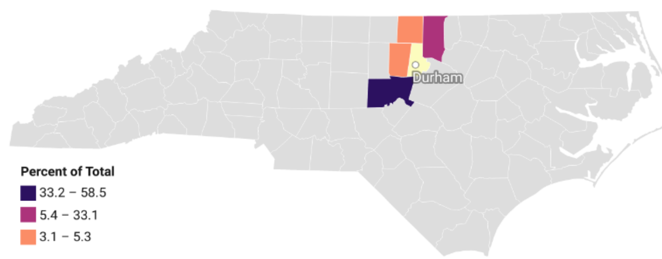
**Durham-Chapel Hill MSA Net Migration, April 1, 2020-July 1, 2021**

(N=3,486)

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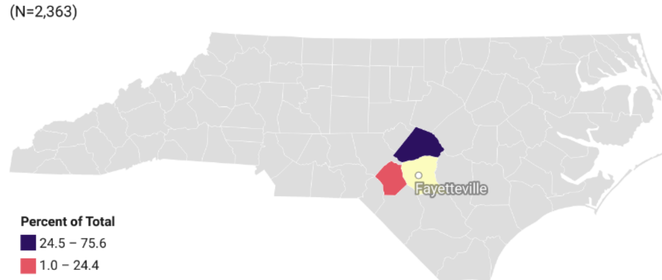
**Fayetteville MSA Net Migration, April 1, 2020-July 1, 2021**

(N=2,363)




Created with Datawrapper

Source: U.S. Census, Population Division (2021)

2 The Fayetteville market is home to a major military installation. In such areas, high mobility is common due to military deployments. In this instance, outmigration from Cumberland County was likely due such deployments and by residents moving in search of more affordable homes in neighboring Harnett and Hoke counties.

In the remaining six multi-county real estate markets—Asheville, Raleigh, Greensboro, Winston-Salem, Hickory, and Wilmington, net migration was more balanced between core and suburban counties (Figure 3).

- Slightly over half of the net migration in the Asheville market concentrated in Buncombe County (53.5%). The balance spread across Henderson (21.8%), Haywood (16.4%), and Madison (8.3%) counties.
- In the Raleigh market, roughly half of migration concentrated in Wake County, one third in Johnston County, and one tenth in Franklin County.

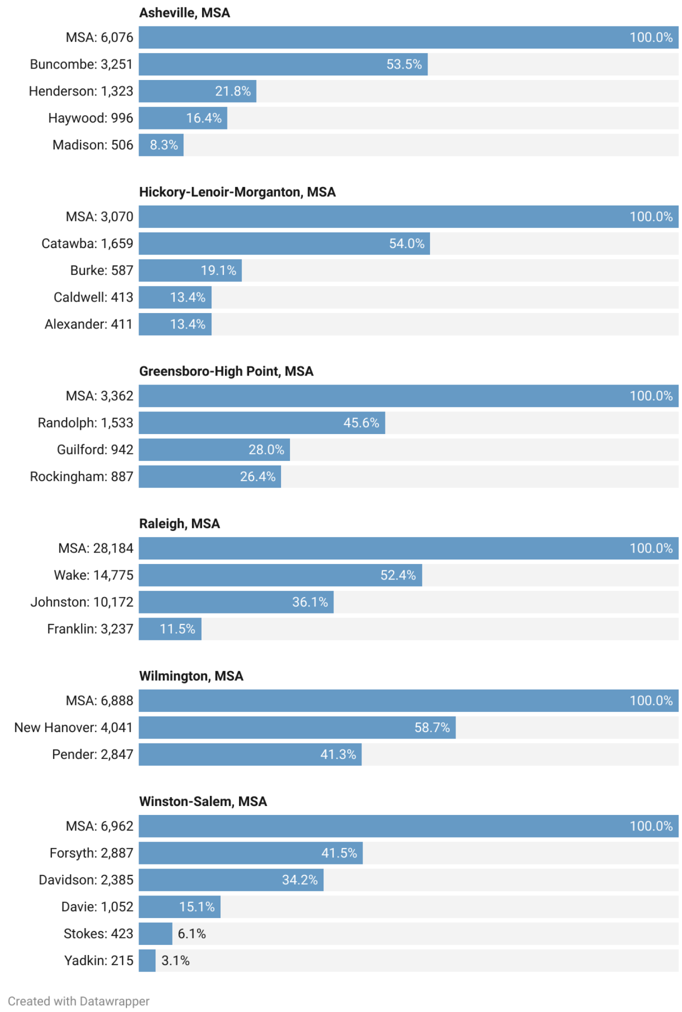
The migration patterns were similar in the Winston-Salem, Wilmington, and Hickory-Lenoir- Morganton markets.

- In the Winston-Salem market, Forsyth County captured 41 percent of net migration while together Davidson (34%) and Davie (15%) captured close to one-half, with Yadkin (.06 percent) and Stokes (.03 percent) beginning to show signs of migration-induced growth.
- New Hanover County captured 58% and Pender County captured 41% of the net migration in the Wilmington market.
- In the Hickory-Lenoir-Morganton market, Catawba County captured over half of net migration while the balance was spread evenly across Burke (19%), Caldwell (13 percent), and Alexander (13%) counties.

Notably, in the Greensboro market, the pattern was slightly different. The market's core county (Guilford) captured only 28 percent of net migration—almost the same share as suburban Rockingham County (26%). Most of the net migration in this market concentrated in Randolph County (45%) during the early phase of the pandemic.

Figure 3

**Net Migration During COVID-19, Selected NC Metro Areas, April 1, 2020 – July 1, 2021**




Source: U.S. Census Bureau, Population Division (2021)

With higher per-capita adjusted gross incomes on average than long-term residents (i.e., non-migrants), newcomers have created an enormous migration dividend for the state (see Johnson, 2021b). While directly boosting business and tax revenues through their aggregate consumer purchasing power, they indirectly have generated spinoff employment and additional economic value through the migration-driven demand for new residential and commercial spaces as well as a broad range of goods and services that undergird the state's population boom.

## Demographic Challenges

However, all is not well in the Tarheel state demographically (Johnson, Bonds, and Parnell, 2022). Disturbing trends and pressing questions hidden beneath the surface of the population boom require immediate policy attention if the state is to remain an attractive place to live, work, play, and do business (Johnson, 2020, 2021b; Johnson, Bonds, & Parnell, 2021b).

First, close to half the state's one hundred counties have been left behind in the population boom. Experiencing slow growth, no growth, or population decline, these counties are places with aging populations, a dearth of employment opportunities, deteriorating infrastructure, limited access to high quality health care, and deaths of despair among prime working age individuals—the all too frequent premature loss of life to suicide, alcohol, and drug abuse—that have accelerated population decline (NCHHS, 2022).[3] This is especially the case for the twenty- eight counties that continued to lose population during the first 15 months of the pandemic (Tables 2 and 3).

County level components of population change, derived from the Census Bureau's recent population estimates, are telling for these counties. As Table 2 shows, eleven experienced biological population decline during the pandemic. More people move in than moved out (1,519), but an excess of deaths over births (-2,676) offset this net migration, creating aggregate population loss for these counties (-1,157).[4] Reflecting an even more dire situation, the other seventeen counties were dying demographically during the pandemic (Table 3). Both net migration and natural population change were negative in these counties. Not only did more people leave than enter these counties (-2,296), but also deaths outpaced births by a substantial margin (-2,868), resulting in overall population loss (-5,196). Like efforts to recruit business to economically distressed areas, future growth and prosperity will hinge on the state's ability to incentivize people to move to these demographically challenged counties (Berger, 2022; Kelly, 2021; Bloom, 2021).

Table 2: Counties Experiencing Biological Decline, April 1, 2020 – July 1, 2021

| County | Natural Change | Net Migration | Absolute Population Change |
|---|---|---|---|
| Beaufort | -365 | 182 | -184 |
| Bladen | -213 | 131 | -81 |
| Caldwell | -604 | 413 | -189 |
| Caswell | -183 | 163 | -22 |
| Greene | -54 | 17 | -34 |
| Halifax | -385 | 30 | -350 |
| Sampson | -126 | 71 | -46 |
| Surry | -509 | 297 | -207 |
| Yadkin | -237 | 215 | -22 |
| **All Counties** | **-2,676** | **1,519** | **-1,157** |

Source: U.S. Census Bureau, Population Division, 2021

3 Deaths of Despair are not unique to North Carolina. Rather, they are a national phenomenon. For a broader discuss of such deaths, see Case and Deaton (2020); Gold (2020); Healy (2019); Jamison (2019); Karma (2020); Bernstein ad Achenbach (2021).

4 The trend toward more deaths than births, especially among Whites, is also a national phenomenon. For a detailed discussion of this trend, see Saenz & Johnson (2016) and Tavernise (2018). Declining fertility is partially responsible for this emergent trend. See Kearney & Levine (2021); Kekkatos (2019); Livingston (2015); Stone (2018); Tavernise (2018, 2021); Tavernise, Miller, Bui, & Gebeloff (2021).

Table 3: Dying North Carolina Counties, April 1, 2020 – July 1, 2021

| County | Natural Change | Net Migration | Absolute Population Change |
|---|---|---|---|
| Bertie | -176 | -250 | -429 |
| Columbus | -435 | -102 | -531 |
| Craven | -16 | -32 | -46 |
| Duplin | -53 | -150 | -200 |
| Edgecombe | -294 | --252 | -541 |
| Gates | -107 | --6 | -112 |
| Hertford | -196 | -80 | -274 |
| Hyde | --45 | -36 | -81 |
| Lenoir | -293 | -128 | -416 |
| Martin | -191 | -86 | -277 |
| Northampton | -184 | -153 | -342 |
| Richmond | -115 | -115 | -222 |
| Robeson | -115 | -112q | -202 |
| Vance | --117 | -277 | -393 |
| Washington | -109 | -2 | -111 |
| Wayne | -189 | -326 | -498 |
| Wilson | -233 | -189 | -415 |
| All Dying Counties | -2,868 (55.5) | -2,296 (44.5%) | -5,164 |

Source: U.S. Census Bureau, Population Division, 2021a

Second, the massive influx of well-off transplants from abroad and other states in the U.S.—both before and during the pandemic—has created a major housing affordability crisis in North Carolina (Johnson, 2021; Southern Economic Advancement Project, 2022; Muraca, 2021; Henkel, 2021; Noguera, 2022; Moore, 2022; ATTOM Staff, 2022; also see Baker, 2022). In the state's rapidly growing county real estate markets, the population boom's attendant accelerated housing costs has forced some long-term residents into structural homelessness, that is, into either staying with relatives and friends on a temporary basis as "couch surfers" or living independently in weekly hotel rentals (Wilson, 2020; Campbell, 2021). It has forced other long-term residents, including most notably some civil servants who are responsible for educating children and protecting public health and safety in these rapidly growing markets—police officers, fire personnel, EMS workers, nurses, and public-school teachers—to seek alternative housing in faraway places from not only their jobs but also their longstanding institutional ties and social networks (Moore, 2022; Flannery, 2022). For affected workers with caregiving responsibilities (children, older adults, or both), the residential dislocation has been particularly stressful, resulting in some instances in economic dislocation or job loss, especially for those forced into one-way daily commutes of ninety minutes or longer--the so-called "super commuter" (Stacker, 2021; also see Henderson, 2017; Perry, 2022; Berr, 2018; Wheatley, 2021; Whitaker, 2021; Forgie, 2021; O'Donnell & Belmont, 2022; Ozimek, 2022).

The housing affordability crisis has not just affected homeowners or those attempting to purchase homes. As reported by Bloomberg (Torres & Marte, 2022),

> *Rental costs in the US are soaring at the fastest pace in more than three decades, surpassing a median of $2,000 a month for the first time ever and pushing rents above pre-pandemic levels in most major cities. Increases are particularly steep in metropolitan areas that saw large influxes of new residents during the pandemic, but the rental market is sparing almost nowhere and no one."*

CoreLogic (2022) reports that "single-family rents rose by a record 14% nationally in May from a year earlier."

A local government official in western North Carolina summed up the impact of pandemic migration on housing cost in his community by stating (Johnson, Bonds, and Parnell, 2021),

> *...wow, do we need affordable housing...with people fleeing the city, every house that's for sale [in this community] is gone. They're [outsiders] buying these houses sight unseen; they're coming here. They don't even go in the home; they're buying them online, and they're fleeing the city. I've got people from New York, Pennsylvania, Tennessee, Florida. They're all coming here. There's no affordable housing. That was a problem before the pandemic, now it is a real problem.*

He continued by stating,

> *We had a billion dollars—one billion dollars in residential real estate sales in the high-country region for the year of 2020. A lot of those folks are relocating from Charlotte, Raleigh, Atlanta, wherever they come from, driving up the property values as well as they come, to the point that any parcel that we could have ever thought about for some sort of [affordable] housing project is so astronomically priced now that it makes it not cost-effective.*

He concluded by saying,

> *So, while in the short term we've got some economic flow in our county, if you were a real estate agent or a construction worker, you were doing ok. But long-term, that's just going to make a hard issue [affordable housing] even worser.*

Describing the impact on his community, another western North Carolina government official said,

> *What I've seen...our population changed. We're a population of 17,800 people...but...we're eight golf courses and two ski resorts. So, all these people that are normally not here chose to flee the city and come to their homes in the mountains [during the pandemic]. So, our population is probably 27,000 people. And that did put a strain...on services that the county provided (Johnson, Bonds, & Parnell, 2021).*

Third, aside from the immediate impacts on housing affordability and the provision of essential services, questions have arisen about the relative permanence of recent net migration to the state, especially the pandemic induced moves. Following COVID, will pandemic refugees leave these perceived safe-haven communities and return to major urban centers? Some media accounts suggest this is already happening (Holder, 2022; Schneider, 2021).

Fourth, many of the communities experiencing rapid growth during the pandemic are highly vulnerable to climate risks (Barnett, 2022). Not unlike their behavior during the pandemic, will the recent transplants subsequently become climate refugees, voting with their feet in response to climate change-induced environmental calamities which are occurring with increasing frequency? It is reasonable to think some may indeed seek climate refuge in more "livable geographies" given the increasing tendency for adverse or extreme weather events to repeatedly devastate vulnerable communities, destroying infrastructure and posing in the process major risks to the health and wellbeing of the residents as well as the financial viability of the impacted communities (Khanna, 2021).

Fifth, paralleling a national trend and fueling additional questions and concerns (Bahrampour, Stevens, Blanco, & Mellink, 2021), North Carolina's total population growth has been slowing markedly over the past three decades—in both absolute and relative terms (Rogers, 2021; Tavernise and Gebeloff, 2021; Johnson, Bonds, and Parnell, 2021a, 2022). This is an issue that is garnering far too little attention in our state.

After growing by 1.42 million in the 1990s (21.4%) and by 1.49 million in the 2000s (18.5%), North Carolina's population increased by only 905,000 between 2010 and 2020 (9.5%), 500,000 fewer than growth in the two previous decades. Several demographic forces are driving this slowing total growth trend.

A sharp decline in international migration, especially during the Trump presidency (12% or 95,000), is partly responsible ((Johnson and Bonds, 2021; Jordan, 2021). North Carolina's foreign-born population grew by 314,923 (27.3%) during the 1990s and significantly slower in both the 2000s (289,646 or 67.3%) and between 2010 and 2019 (154,985 or 22.9%).

Slowing white population growth also is partly responsible for slowing total population growth in North Carolina (Johnson, 2021b; Srikanith, 2021).[5] Nationally (-5.1 million or 2.6%) and in thirty-five states the white population declined for the first time in history between 2010 and 2020 (Srikanth, 2021; Haroun and Hoff, 2021).[6] North Carolina's white population continued to grow but slower than in previous decades (Johnson, 2021). After increasing by 676,028 in the 1990s (13.5%) and slightly slower by 576,000 (10.4%) between 2000 and 2010, North Carolina's white population grew by only 88,153 (1.4%) between 2010 and 2020. Further, during the first fifteen months of the pandemic, the state's white population grew even slower (0.5 percent), signaling that North Carolina may soon join the nation and other states in experiencing white population loss (U.S Census Bureau, Population Division, 2021, 2022).

This is not an unreasonable scenario.  According to the NC State Center for Health Statistics, the rate of natural increase (births minus deaths) for North Carolina's total population has been slowing progressively for the past decade and deaths have exceeded births among whites since 2015 (Table 4; NC SCHS, nd). Further, deaths of despair have claimed the lives of 22,000 prime working age North Carolinians—many of whom were whites with less than a college education--since 2000 (NCDHHS, 2022). Making matters worse, such deaths have been on the rise during the pandemic (Centers for Disease Control, nd).  In addition, many who have moved away from these counties are young adults, those of childbearing age. With fewer potential parents, lower fertility rates, and an older population, it is not surprising that deaths exceed births among whites in these counties.

5 Our use of the term "white" refers to the non-Hispanic white population as defined by the Census Bureau.

6 Between April 1, 2020 and July 1, 2021, the District of Columbia along with thirty-three states experienced white population loss (U.S. Census Bureau, Population Division, 2022).

Table 4: Rates of Natural Population Change, North Carolina's Total and White Populations, 2008-2019

| Year | Total Population | White Population |
|---|---|---|
| 2019 | 2.2 | -1.3 |
| 2018 | 2.4 | -1.0 |
| 2017 | 2.6 | -0.9 |
| 2016 | 3.0 | -0.3 |
| 2015 | 3.2 | -0.2 |
| 2014 | 3.6 | 0.3 |
| 2013 | 3.6 | 0.3 |
| 2012 | 3.9 | 0.6 |
| 2011 | 4.2 | 0.9 |
| 2010 | 4.6 | 1.2 |
| 2009 | 5.3 | 4.3 |
| 2008 | 5.8 | 4.8 |

Source: North Carolina State Center for Health Statistics

## Pressing Questions

Over the past three decades, success in producing, attracting, and retaining incredible talent has strongly shaped North Carolina's reputation as one of the best places in the country to do business—underscored by recent business recruitment successes across multiple economic sectors (CNBC, 2022). But concerns about the relative permanence of pandemic refugee migration, the very real possibility of widespread climate migration, and documented evidence of disruptive demographic headwinds that are just around the corner if not already on our proverbial streets and knocking at our doors should force North Carolina policymakers, government officials, and community leaders—indeed all of us--to pause and seek answers to several important questions about the state's future.

With both components of population change (natural increase and net migration) pointing to continued slowing of total population growth nationally and in the state (Chamie, 2021; Khanna, 2021; Haoun & Hoff, 2021; Rogers, 2021; Tavernise & Gebeloff, 2021),

- Will North Carolina continue be a net migration magnet? [7]
- Can the state's current economic growth trajectory be sustained?
- With continued below replacement level fertility, can we produce the talent required to meet the demand generated by the businesses successfully recruited to North Carolina?
- Can we continue to generate the tax revenue to cover our public infrastructure needs and the incentive packages assembled to attract recently recruited businesses?
- With threat of potential future enrollment declines, will our system of higher education remain viable?
- Fully recognizing we are only as strong as our weakest link how do we promote renewed population growth and economic development in the counties left behind while simultaneously maintaining and sustaining the vitality of the growth magnets in the state's current demographic and economic boom?

We urgently need answers these questions. Our state--and indeed the nation—cannot afford to be blindsided by predictable change.

7 This is a legitimate question given, for example, the recently enacted Chips and Science Act, "which will spend hundreds of billions of dollars on rebuilding the U.S. manufacturing base to better compete with China" (Waldman and Sargent, 2022). Much of the reshoring of the semiconductor industry and by extension the concomitant demand for homegrown workers will likely occur in Industrial Heartland states like Indiana, Ohio, and Michigan.

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