

April 2014



DEMOGRAPHIC AND ECONOMIC IMPACTS OF INTERNATIONAL  
MIGRATION TO NORTH CAROLINA

James H. Johnson Jr and Stephen J. Appold

FRANK HAWKINS KENAN INSTITUTE OF PRIVATE ENTERPRISE

Kenan-Flagler Business School

THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL



UNC  
KENAN-FLAGLER  
BUSINESS SCHOOL



## TABLE OF CONTENTS

Executive Summary	1
1.0 Introduction and Purpose	3
2.0 International Migration to North Carolina	3
2.1 Historical Overview	3
2.1.1 Immigrant Origins	3
2.1.2 Citizenship Status	5
2.1.3 Educational Attainment	5
2.2 Contemporary Snapshot	6
2.2.1 Diverse Origins, Diverse Destinations	6
2.2.2 Race/Ethnicity, Age, and Marital Status	8
2.2.3 Household Type, Childbearing & Family Size	10
2.2.4 Labor force participation, Industry, and Occupation	11
2.2.5 Sources of Income, Health Coverage, and Poverty Status	12
2.3 Summary	15
3.0 Estimating Immigrant Economic and Fiscal Impacts	15
3.1 Analytical Framework	15
3.2 Demographic Targets	16
3.3 Sources of Data	17
3.4 Findings	19
3.4.1 Estimates of Economic Contributions	19
3.4.2 Estimates of Fiscal Impacts	21
3.4.3 Assessing Fiscal and Economic Balances	28
4.0 Discussion, Conclusions, & Implications	30
5.0 References Cited	33
APPENDIX A: Methodology used to Estimate of Tax Contributions	34

## LIST OF TABLES

1. Absolute and Percent Population Change for the U.S., the South, and North Carolina, 1960–2010	4
2. Absolute and Percent Change in the Foreign-born Population, Selected Years, 1960–2012	4
3. North Carolina Net Migration, Total and International, 2004–2010	7
4. Distribution of Foreign-born by Community Type, 2012	7
5. Top Ranking Immigrant Communities in NC, 2010	9
6. Percent of Foreign-born by World Region of Birth/Country of Origin and NC County of Residence in 2012	9
7. Race/Ethnicity Characteristics of NC's Native and Foreign-born Populations, 2012	9
8. North Carolina Women 15–50 Who Had a Birth in Past 12 months by Marital Status and Nativity, 2012	11
9. North Carolina Household Types and Sizes by Nativity and Citizenship Status	11
10. North Carolina Class of Worker by Nativity and Citizenship Status, 2012	12
11. Health Insurance Coverage Status in North Carolina by Citizenship Status, 2012	14
12. Poverty Rates for Families for Whom Poverty is Determined by Nativity & Citizenship Status, 2012	14
13. Direct Effects of Consumer Spending of Selected Demographic Groups	22
14. Indirect Effects of Consumer Spending of Selected Demographic Groups	23
15. Total and Per capita Expenditures on Essential Services	25
16. Total and Per capita Income from Participation in Government Transfer Programs	26
17. Total, Direct, and Indirect Tax Contributions by Race/Ethnicity and Lifetime Migration Status (per capita)	27
18. Summary of Per Capita Economic Impact	30

## LIST OF FIGURES

1. North Carolina Foreign-Born Population Growth, 1960-2012	4
2. World Region of Birth of North Carolina's Foreign-born Population, Before 2000-2012	6
3. Citizenship Status of North Carolina's Foreign-born Population, Before 2000 – 2012	6
4. Educational Attainment of North Carolina's Foreign-born Population, Before 2000 – 2012	6
5. Countries of Origin for North Carolina's Foreign Born, 2012	7
6. Immigrant Population in North Carolina by County, 2012	7
7. Age of the North Carolina Population by Nativity and Citizenship Status, 2012	10
8. Marital Status of North Carolina Population by Nativity, 2012	10
9. Household Types in North Carolina by Nativity and Citizenship Status, 2012	10
10. Employment Status of North Carolina Population by Nativity and Citizenship Status, 2012	11
11. North Carolina Industry Profile by Nativity and Citizenship Status, 2012	12
12. North Carolina Occupational Profile by Nativity and Citizenship Status, 2012	13
13. Earnings in the Past 12 Months for Full Time, Year Round North Carolina Workers by Nativity and Citizenship Status, 2012	13
14. Sources of Income in Past 12 Months in North Carolina by Nativity and Citizenship Status, 2012	13
15. Percent of North Carolina Population Living Below Poverty Level in Past 12 Months by Nativity and Citizenship Status, 2012	14
16. Conceptual Framework for Assessing the Economic Impact of Immigrants in North Carolina	16
17. Lifetime Migration Status of North Carolina's Major Race/Ethnic Groups, 2010	17
18. Distribution of North Carolina Buying Power by Migration Status and Community Type	20
19. Distribution of North Carolina Buying Power by Race and Community Type, 2012	20
20. Consumer Buying Power in North Carolina Metropolitan Areas, 2010	20
21. Summary of Immigrant Households Impact on the State Budget	29
22. Summary of Hispanic Population Impact on the State Budget	29



# EXECUTIVE SUMMARY

Immigrants are playing a pivotal role in reshaping the North Carolina demographic and economic landscape. Today, there are roughly 750,000 foreign-born residents of The State, up from 22,000 in 1960 (Figure 1).

North Carolina's immigrants hail from literally every region of the world. Most of the recent arrivals, who are mainly from Latin America and Asia (Figure 2), have settled primarily in The State's major metropolitan areas, although there are notable concentrations in small towns and rural areas where there are industries that rely heavily on immigrant labor (Table 4, Table 5, and Figure 6).

Our immigrant newcomers are more likely to be people of color—Mexican, El Salvadorian, Honduran, Guatemalan, Indian, Chinese, Vietnamese, Korean, and Filipino—than to be non-Hispanic white (Figure 5 and Table 7). They are naturalized citizens and non-citizens (Figure 3); well educated and not-so-well-educated (Figure 4).

In comparison to the native-born, North Carolina's immigrants are more likely to be in their prime working ages (Figure 7), more likely to be married and live in married couple households (Figures 8 and 9), and more likely to be employed in the industries and occupations that propelled North Carolina's economic growth over the past two decades (Figures 11 and 12). Immigrants have higher poverty rates than the native-born (Table 12 and Figure 15). But they are far more likely to be the working poor than the jobless poor.

Despite higher rates of poverty, immigrants are less likely than the native born to rely on means-tested sources of income provided by the government (Figure 14). They also are less likely than the native born to benefit from health insurance coverage. But those who are insured are more likely than the native born to rely on private rather than public sources of coverage (Table 11).

Through their consumer purchasing power, immigrants have had a profound impact on The State's economy. Even after discounting their buying power to account for remittances, savings, and interest payments, immigrant purchases rippled through North Carolina's economy, creating an overall economic impact of \$19.76 billion in 2010. On a per capita basis, immigrant consumer spending was greater than the consumer

spending of one native born (the NC born and bred) and three race/ethnic groups (Blacks, other races, and Hispanics) (Table 13).

As a target of most of the attention in the immigration reform debate, the economic contributions of Hispanic newcomers to The State—most of whom are immigrants—merit special attention. Hispanic buying power (\$9.5 billion) rippled through The State's economy creating an overall economic impact of \$10.3 billion, or \$12,895 per Hispanic resident, in 2010. In addition, Hispanic consumer spending was responsible for creating 92,000 spin-off jobs which, in turn, generated \$3.4 billion in spin-off labor income, \$460 million in spin-off state and local taxes, \$444 million in spin-off federal taxes, and \$367 million in spin-off social insurance payments. Consumer spending by all immigrants generated 171,000 spin-off jobs, \$6.4 billion in spin-off labor income, \$1.4 billion in spin-off state and local taxes, \$863 million in spin-off federal taxes, and \$693 million in spin-off social insurance payments (Table 14).

For immigrants and Hispanic newcomers, The State spent \$2.3 billion and \$2.0 billion, respectively, on essential services—K-12 education, health services, and public safety—in 2010 (Table 15). On a per capita basis, more was spent on immigrants than any other demographic group. The State spent more on Hispanics than it did on two other race/ethnic (Asians and Whites) and two native born (domestic imports and the North Carolina born and bred) groups. At the same time these public investments were being made, The State received \$2.4 billion and \$1.5 billion, respectively, in total tax revenue (direct and indirect contributions) from immigrants (\$3,869 per capita) and Hispanics (\$1,900 per capita) in 2010 (Table 17). The difference between immigrants' estimated direct and indirect tax contributions and their estimated public cost resulted in a net fiscal surplus to The State of \$537 million—approximately \$468 per immigrant household resident. The difference between Hispanics' estimated tax contributions and their estimated public costs resulted in a net fiscal loss to The State of \$462 million or about \$578 per Hispanic resident.

Juxtaposing the net contributions of these two groups (consumer spending and tax contributions) against their corresponding cost of essential services (Figures 21 and 22) revealed that \$10 in revenue was generated for every \$1 The State in-

vested in essential services for immigrants; \$6 was generated for every \$1 invested in essential services for Hispanics (Table 18). In other words, the overall economic impact of both groups—immigrants and Hispanics—was net positive, underscoring the need for an open door immigration policy, especially given the aging of North Carolina’s native born population and likely continuing population losses and growing dependency rates in The State’s rural counties.



# NORTH CAROLINA

## 1.0 INTRODUCTION AND PURPOSE

Our goal in this report is to assess the demographic and economic impacts of immigrants or the foreign-born on North Carolina regions, counties, and communities as well as The State as a whole.<sup>1</sup> Toward this end, we begin with a brief historical overview of international migration to North Carolina. Drawing upon prior research and data from the 2012 American Community Survey (ACS) and the IRS Migration File, we devote specific attention to how immigrants or the foreign-born have been integrated into North Carolina communities and The State's economy. Next, we undertake a detailed analysis of immigrant economic impacts, addressing empirically one of the most critical issues in the current policy debate about immigration reform: do immigrants contribute more than they cost? We utilize data from the ACS, Census 2010, and other public sources and an input-output model to estimate immigrant costs and contributions to the North Carolina economy.<sup>2</sup> We conclude with a summary of our major findings and a detailed discussion of the implications for the future viability and competitiveness of North Carolina.

## 2.0 INTERNATIONAL MIGRATION TO NORTH CAROLINA

North Carolina has experienced unprecedented population growth over the past fifty years. In absolute terms, the population increased from 4.6 million in 1960 to 9.5 million in 2010. In relative terms, North Carolina (109.3%) grew significantly more rapidly than the U.S. (72.2%) and slightly more rapidly than the South (108.4%) during this period (Table 1).

Two demographic drivers are responsible for this growth:

<sup>1</sup> The terms "immigrant" and "foreign-born" are used interchangeably throughout this report. Moreover, the immigrant or foreign born population is divided into two subgroups in certain sections of report: naturalized citizens and non-citizens. To become a naturalized citizen, an immigrant must be at least 18 years of age; have lawful permanent residence (a green card) for at least five continuous years (three continuous years if the individual is married to a U.S. citizen); no criminal record; the ability to read, write, and speak simple words and phrases in English; and knowledge and understanding of American History fundamentals and U.S. government principles. Non-citizens include, among others, immigrants who enter the U.S. as temporary workers, international students, foreign diplomats, refugees, parolees, or asylees. The native-born includes anyone who was a U.S. citizen or U.S. national by birth. This include individuals who were born in the United States, Puerto Rico, a U.S. Island Area (U.S. Virgin Islands, Guam, American Samoa, or the Commonwealth of the Northern Marian Islands), or abroad of a U.S. citizen parent or parents, are defined as native (See Gryn and Larsen, 2010).

<sup>2</sup> As a basis for comparison, we also estimate the economic impact of non-movers (i.e., the North Carolina born and bred) and domestic migrants (i.e., movers from other states), as well as the major race/ethnic groups, including Hispanics, The State's largest immigrant group.

natural population increase, that is, an excess of births over deaths, and net in-migration, which has included both movers from other states (domestic migrants) and movers from abroad (international migrants). Prior research has shown, however, that migration—domestic and international—has been far more important than natural increase in overall population growth (Johnson and Parnell, 2012).

### 2.1 Historical Overview

International migration to North Carolina is, for the most part, a post-1960 phenomenon (Figure 1). The State's foreign-born population increased on average by about 14,000 or 65% annually between 1960 and 2012. But, most of the absolute growth in the foreign-born population—roughly 85% of the total—has occurred since 1990 (Table 2). Today, there are nearly 750,000 foreign-born residents of The State—up from roughly 22,000 in 1960 (Figure 1).

International migration to North Carolina over the past half century has been driven by changes in federal immigration policy and structural changes in the economies of The State, the nation, and the world. To a large degree, as we show below, these forces have strongly influenced the geographic origins, citizenship status, and educational attainment levels of international movers to North Carolina.

#### 2.1.1. Immigrant Origins

Prior to 2000, as Figure 2 shows, a significant share of the immigrant newcomers to North Carolina was from Europe and North America. The flows from these two regions were a hold-over or legacy of our twentieth century immigration policy that favored immigrants of European descent. Phenotypically similar to Anglo-Saxons, immigrants from Europe were assumed to be able to assimilate into the mainstream of American society more easily than prospective immigrants from other regions of the world.

Between 2000 and 2009, however, there was a major shift in immigrant origins, from Europe and North America to Latin America, Asia, and Africa, as Figure 2 illustrates. This dramatic

Table 1

ABSOLUTE AND PERCENT POPULATION CHANGE FOR THE U.S., THE SOUTH, AND NORTH CAROLINA, 1960-2010

<i>Area</i>	<i>1960 Total Population</i>	<i>2010 Total Population</i>	<i>Percent Change</i>
<b>U.S.</b>	179,323,175	308,745,538	72.2
<b>The South</b>	54,973,000	114,555,714	108.4
<b>North Carolina</b>	4,556,155	9,535,471	109.3

Source: Forstall (1996); Census 2000; Census 2010.

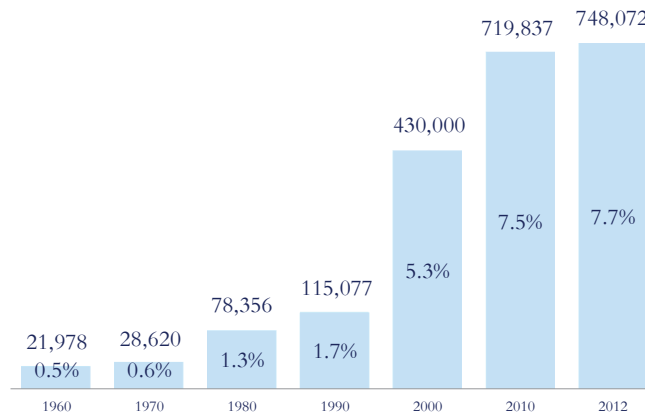
Table 2

ABSOLUTE AND PERCENT CHANGE IN THE FOREIGN-BORN POPULATION, SELECTED YEARS, 1960-2012

<i>Period</i>	<i>Absolute Change</i>	<i>Percent Change</i>
<b>1960-1970</b>	6,642	30.2%
<b>1970-1980</b>	49,736	173.8%
<b>1980-1990</b>	36,721	46.9%
<b>1990-2000</b>	314,923	273.7%
<b>2000-2010</b>	289,137	67.2%
<b>2010-2012</b>	28,935	4.0%
<b>2000-2012</b>	318,072	74.0%
<b>1960-2012</b>	726,094	3,303.7%

Source: Forstall (1996); Census 2000; Census 2010; ACS 2012.

Figure 1  
NORTH CAROLINA FOREIGN-BORN POPULATION  
GROWTH, 1960-2012



Source: Forstall (1996); Census 2000; Census 2010; ACS 2012.

shift in immigrant origins reflected the full fledge effect of the Hart-Cellar Act of 1965—an amendment to U.S. immigration law that eliminated discriminatory barriers to entry based on geographic origin and lifted strict quotas previously imposed on people aspiring to emigrate to the U.S. from places other than Europe.

By creating employer demand for unskilled, semi-skilled, and highly skilled labor, North Carolina's booming economy during both the 1990s and the 2000s played a pivotal role in this shift in immigrant origins. In fact, North Carolina-based employers were actively engaged in both formal and informal recruitment of international workers, especially from Mexico and Central America, to fill pressing labor needs in The State's economy during the 1990s (Johnson-Webb, 2002; 2003), continuing well into the 2000s (Kasarda and Johnson, 2006).

Since 2010, as Figure 2 reveals, there has been yet another shift in the origins of immigrant newcomers to North Carolina: a sharp drop in the share of movers from Latin America (32.9% versus 65.2% between 2000 and 2009) and a concomitant increase in the share of movers from Asia (43.3% versus 20% between 2000 and 2009). These most recent shifts in immigrant origins were prompted in part by government-mandated heightened security measures along the U.S.-Mexico border, which were aimed at curtailing to the maximum extent possible the influx of unauthorized immigrants from Mexico and other parts of Latin America, and partly by a growing demand for highly-skilled workers to fuel entrepreneurship and continued high tech employment growth in our nation's post-recession economy (Mills and Doerr, 2011; Vigdor, 2013).

Largely as a function of these historic and contemporary demographic drivers and influences, the majority of The State's foreign-born population in 2012—nearly early 60%—was from Latin America. The second largest segment—almost a quarter—was from Asia and the remainder was from Europe, Africa, North America, or Oceania.

### **2.1.2 Citizenship Status**

Before 2000, the immigrant pool was evenly split between naturalized citizens (49.2%) and non-citizens (50.8%). As Figure 3 shows, however, there was a dramatic shift toward non-citizen immigrant newcomers between 2000 and 2009.

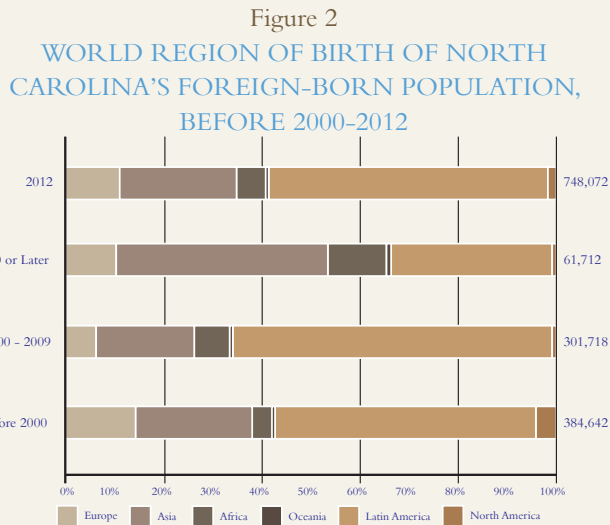
Most of the non-citizens who arrived prior to 2000 mainly

filled jobs in the agriculture sector. But, as we show below, the much larger number arriving during the first decade of the new millennium were either attracted by or recruited to fill employment opportunities in the construction trades and services industries that undergirded The State's population/real estate development boom and emergent urban-industrial and high tech economy. Largely as function of these structural shifts in labor demand, a majority of The State's immigrants was non-citizens (68%) in 2012. Only a third (32%) was naturalized citizens (Figure 3).

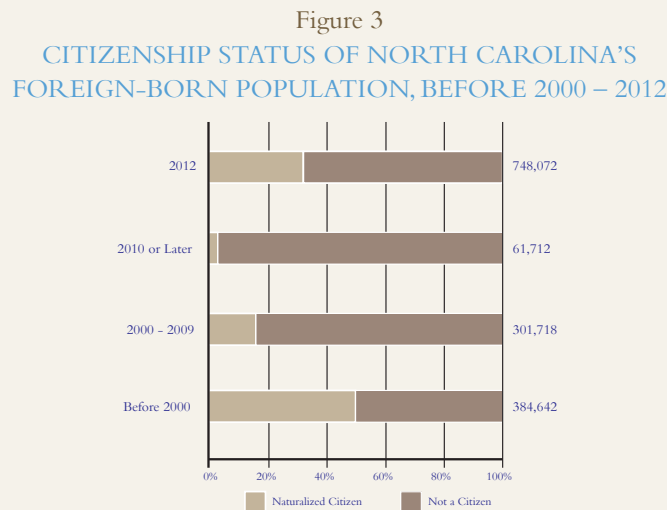
### **2.1.3 Educational Attainment**

Prior to 2000, slightly over half of The State's immigrants (53.8%) had either less than a high school education (32.9%) or were at best high school graduates (20.9%). But, as Figure 4 illustrates, the share of immigrant newcomers with low levels of educational attainment—that is, either high school graduates (20.9%) or less than high school educated (42.6%)—increased to nearly two thirds (63.5%) between 2000 and 2009. This shift coincided with the sharp increases in employer demand for unskilled and semi-skilled labor in North Carolina's booming construction trades, poultry and meat processing, and other blue collar industries during the first decade of the new millennium (prior to the onset of the Great Recession).

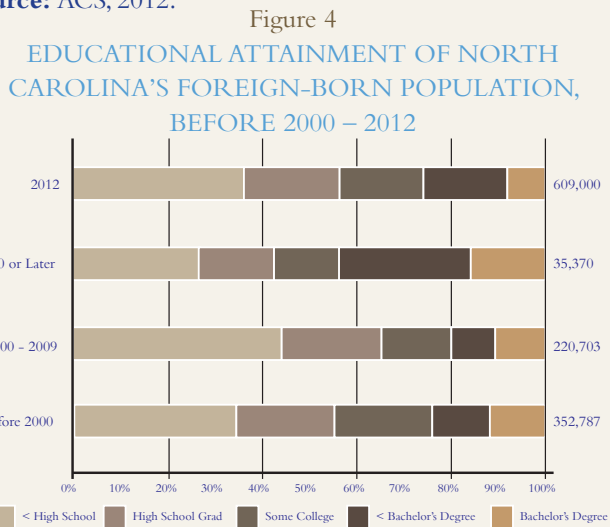
Since 2010, however, the educational attainment levels of immigrant newcomers have flipped. As Figure 4 shows, the share of immigrants with some college, a bachelor's degree, or a graduate/professional degree (57.5%) has been significantly greater than the share with a high school degree or less (42.5%). This shift was part of a broader national strategy to jump start economic and employment growth in the aftermath of the Great Recession of 2007-2009. The U.S. government shifted its stance on immigration, placing a premium on the recruitment of highly skilled as opposed to low-skilled immigrant workers and entrepreneurs (Mills and Doerr, 2011). In part as a consequence of this policy shift, there was a near even split between the less educated and the well educated in the North Carolina immigrant population in 2012. As Figure 4 shows, this pattern was similar to educational levels of immigrants who came to The State before 2000.



Source: ACS, 2012.



Source: ACS, 2012.



Source: ACS, 2012.

## 2.2 Contemporary Snapshot

Today, owing partly to the diverse origins and backgrounds of the international migrants, North Carolina is far more demographically diverse than it was a half century ago. Immigrants have contributed in major ways to a reshaping of the geographic make up and racial/ethnic composition as well as the socio-economic status of The State's population.

According to data extracted from the IRS Migration file, for example, international migrants accounted for roughly 5% of The State's population growth due to net migration between 2004 and 2010 (Table 3). Out-migration exceeded in-migration for movers from abroad in only one year during this period (2009-10). In the remaining five years, international movers accounted for between 4.2% (2006-07) and 8.6% (2008-09) of migration-induced population growth in North Carolina.

To illustrate the scope and breadth of their impact, we use a number of geographic and socio-demographic indicators to distinguish foreign-born from native-born North Carolinians. Along the way, we address a number of myths about immigrant newcomers to North Carolina.

### 2.2.1 Diverse Origins, Diverse Destinations

Above and beyond the data on world regions of birth (see Figure 2), the specific countries of immigrant origins provide additional insights into the contributions of the foreign-born to North Carolina's growing population diversity. The relevant data are presented in Figure 5.

Among Latin American immigrants, the largest share—almost two-thirds (64%)—is from Mexico. The second largest share—roughly one-fifth—is from El Salvador, Honduras, Guatemala, or Colombia. The balance is from a host of other Latin American countries, including most notably Cuba, the Dominican Republic, and Peru.

A majority of North Carolina's Asian immigrants is from one of five countries: India, China, Vietnam, Korea, or the Philippines. Smaller shares are from Thailand, Laos, Burma, Pakistan, and Japan.

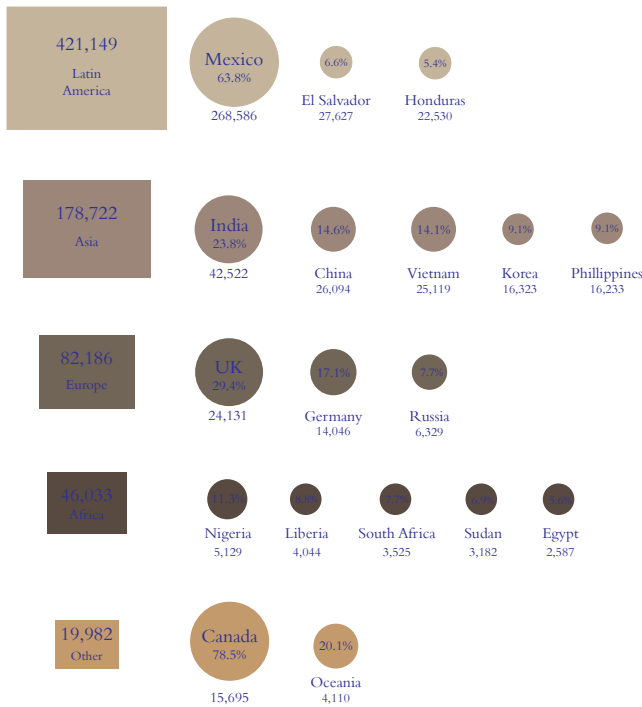
Close to half of The State's European immigrants (46.5%) are from either the United Kingdom or Germany. About one fifth is from Russia, Italy, Poland, or France. And the balance is

Table 3  
NORTH CAROLINA NET MIGRATION, TOTAL AND INTERNATIONAL, 2004-2010

Year	All Migrants	International Migrants	International share of Net Migration
2009-10	+13,803	-457	0.0
2008-09	+26,210	+2,255	8.6
2007-08	+40,995	+2,638	6.4
2006-07	+41,267	+1,746	4.2
2005-06	+41,755	+2,182	5.2
2004-05	+28,374	+1,816	6.4
<b>TOTAL</b>	<b>+192,406</b>	<b>+10,180</b>	<b>5.3</b>

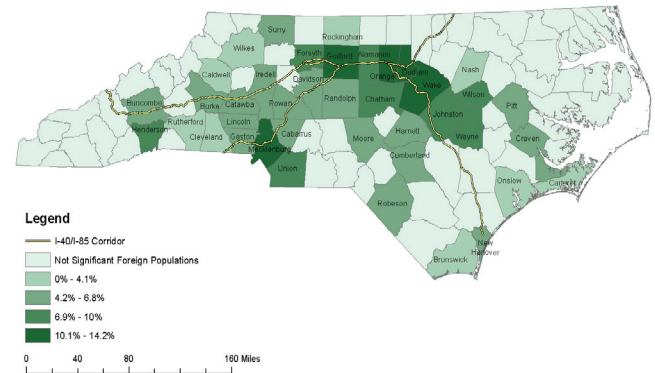
Source: IRS Migration File.

Figure 5  
COUNTRIES OF ORIGIN FOR NORTH CAROLINA'S FOREIGN BORN, 2012



Source: ACS, 2012.

Figure 6  
IMMIGRANT POPULATION IN NORTH CAROLINA BY COUNTY, 2012



Source: ACS, 2012.

Table 4  
DISTRIBUTION OF FOREIGN-BORN BY COMMUNITY TYPE, 2012

Geographic Area of Residence	Percent Foreign Born
<b>The State</b>	7.7
<b>Metropolitan Area</b>	8.9
• Inside Principal City	11.8
• Outside Principal City	6.3
<b>Micropolitan Area</b>	4.8
• Inside Principal City	6.5
• Outside Principal City	4.2
<b>Not in Metropolitan or Micropolitan Area</b>	4.6
<b>Urban</b>	9.4
<b>Rural</b>	4.3

Source: ACS, 2012 (GCT0501).

from the Ukraine, Bosnia-Herzegovina, Romania, or Greece.

Forty percent of North Carolina's African immigrants are from one of five countries: Nigeria, Liberia, South Africa, the Sudan, or Egypt. The balance is from a host of other African countries, including Kenya, Ghana, Morocco, and Ethiopia.

Rounding out the diversity of The State's immigrant population is a relatively small but noteworthy influx of foreign-born migrants from Canada and a very small group from Oceania—mainly Australia and New Zealand (Figure 5).

Immigrants, according to ACS population estimates, comprised 7.7% of North Carolina's 2012 population and were dispersed across 40 of The State's 100 counties. As Figure 6 reveals, North Carolina's immigrants were highly concentrated in six counties where they accounted for 10 percent or more of the population: Mecklenburg (14.2%), Durham (13.6%), Wake (12.9%), Orange (11.9%), Guilford (11.1%), and Union (10.0%). In another eight counties, they accounted for between 7.0 percent and 9.9 percent of the population. In 11 counties, the immigrant share of the total population ranged between 5.5 percent and 6.9 percent. And in 14 counties, the foreign-born made up between 1.0 percent and 5.4 percent of the population in 2012. Absent their immigrants, some of these counties would have lost population during the first decade of the new millennium (Johnson and Parnell, 2012).

Across these 40 counties, North Carolina's immigrants were more likely to be concentrated in urban (9.4) than rural (4.3%) areas. They were more likely to reside inside (7.9%) than outside (4.6%) a metropolitan or micropolitan area. And those living in a metropolitan (8.9%) or micropolitan (4.8%) area were more likely to reside inside (11.8% and 6.5%, respectively) rather than outside (6.3% and 4.2%, respectively) the principal city (Table 4).

The top 14 North Carolina communities for immigrants in 2010 are shown in Table 5. With exception of Asheville, Greenville, Wilmington, and two military towns (Jacksonville and Fayetteville), all of the communities are located in North Carolina's so-called urban crescent which extends along the I-85/I-40 corridor from Wake County in the Research Triangle to Mecklenburg County in the Metrolina Region. In each of these communities, immigrants played a pivotal role in population growth during the first decade of the millennium (Johnson and Parnell, 2012).

With regard to destination selection, there is some evidence

of immigrant spatial or geographical sorting within The State based on world region of birth or country of origin. Table 6 highlights three of the five counties with the highest concentrations of immigrants in 2012. It reveals that:

- Asian immigrants were concentrated at slightly higher rates in Guilford County (33.9%) and Wake County (35.9%) than in Mecklenburg County (26.9%).
- European immigrants were concentrated at slightly higher rates in Mecklenburg County (10.8%) and Wake County (10.8%) than in Guilford County (7.8%).
- Latin America immigrants were concentrated at a significantly higher rate in Mecklenburg County (50.6%) than in Guilford County (40.9%) and Wake County (41.7%).

As Table 6 reveals, Mexican immigrants, the largest subset of all Latin American immigrants, were more evenly distributed across these three counties. In general, Mexican immigrants tend to be more geographically dispersed throughout The State than other immigrant groups—not only in urban but also rural communities—largely as a function of the industrial and occupational niches they fill in the North Carolina economy, as we discuss below (also see Kasarda and Johnson, 2006).

### ***2.2.2 Race/Ethnicity, Age, and Marital Status***

Emblematic of what we have referred to elsewhere as the “browning” of North Carolina (Johnson and Kasarda, 2011), the foreign-born were far more likely to self-identify as Hispanic, Asian, or some other race and far less likely to self-identify as non-Hispanic white than the native born in 2012. And, as Table 7 shows, this was the case irrespective of citizenship status, that is, whether the foreign-born were naturalized citizens or non-citizens.

In addition to attracting large numbers of people of color, international migration to North Carolina has been highly selective of individuals between the ages of 25 and 44, that is, people in their prime working age years (Figure 7). Fifty percent of the foreign-born population, compared to 25% of the native-born population, fell into this age group in 2012. Non-citizens (56%) were far more likely than naturalized citizens (36%) to be these ages. As we show below, these relatively young non-

Table 5  
TOP RANKING IMMIGRANT COMMUNITIES IN NC, 2010

<i>Rank</i>	<i>City</i>	<i>2010 Population</i>	<i>Percent Foreign-born</i>
1	Cary	135,418	19.1
2	Raleigh	406,609	14.8
3	Durham	229,029	14.5
4	Charlotte	734,418	14.4
5	High Point	103,672	12.8
6	Concord	79,330	11.8
7	Winston-Salem	230,044	11.6
8	Greensboro	270,357	10.9
9	Gastonia	71,782	10.7
10	Fayetteville	201,077	7.0
11	Asheville	83,570	6.8
12	Wilmington	106,819	6.0
13	Jacksonville	70,705	5.3
14	Greenville	84,879	4.9

**Source:** USA.com <http://www.usa.com/rank/north-carolina-state--foreign-born-population-percentage--city-rank.htm?hl=Cary&hlst=NC&yr=6000>.

Table 6  
PERCENT OF FOREIGN-BORN BY WORLD REGION OF BIRTH/COUNTRY OF ORIGIN AND NC COUNTY OF RESIDENCE IN 2012

<i>Born In</i>	<i>North Carolina</i>	<i>Mecklenburg County</i>	<i>Guilford County</i>	<i>Wake County</i>
<b>Asia</b>	23.9	26.9	33.9	35.9
<b>Europe</b>	11.0	10.8	7.8	10.8
<b>Latin America</b>	56.3	50.6	40.9	41.7
<b>Mexico</b>	35.9	21.3	24.1	25.2

**Source:** American Community Survey, 2012 (GCT0502).

Table 7  
RACE/ETHNICITY CHARACTERISTICS OF NC'S NATIVE AND FOREIGN-BORN POPULATIONS, 2012

<i>Race/Ethnicity</i>	<i>Total</i>	<i>Native Born</i>	<i>Foreign-born</i>	<i>Naturalized Citizen</i>	<i>Non-Citizen</i>
<b>White</b>	69.9	71.6	49.7	44.9	52.0
<b>Black</b>	21.6	22.8	7.9	12.0	6.0
<b>AI/AN</b>	1.2	1.2	0.7	0.6	0.7
<b>Asian</b>	2.3	0.8	21.3	32.3	16.2
<b>NH/PI</b>	0.1	0.0	0.3	0.3	0.3
<b>Some other race</b>	2.6	1.4	17.6	6.7	22.7
<b>2 or more races</b>	2.3	2.3	2.5	3.3	2.0
<b>Hispanic</b>	8.7	5.0	52.4	24.9	65.4

**Source:** American Community Survey, 2012 (GCT0502).



citizens have filled much of the demand for labor in the booming blue collar sector of the North Carolina economy over the past two decades.

Despite being relatively young, the foreign-born (58.4%) were far more likely than the native-born (48.1%) to be currently married (Figure 8). Given these differential marriage rates, it should not be surprising that the shares of the population that were separated, widowed, or divorced were much lower among the foreign-born (2.6%, 3.4%, and 5.6%, respectively) than the native born (3.2%, 6.5%, and 11.3%, respectively). In 2012, as Figure 8 illustrates, the shares of the foreign-born or immigrants (30.8%) and native born (30.1%) populations who were never married were very similar. Immigrant households thus appear to be more stable than native born households.

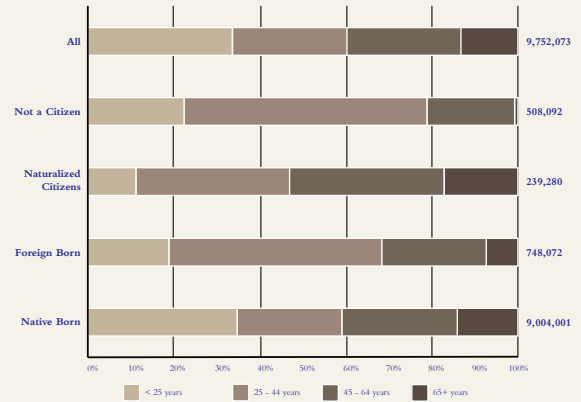
### 2.2.3 Household Type, Childbearing & Family Size

As one would expect, given the statistics on marital status in Figure 8, the foreign-born (61%) were more likely than the native born (57%) to live in married couple households in 2012. Among immigrants, this was especially the case for naturalized citizens who lived in married couple households (71%) at a much higher rate than the native born (57%). Non-citizens (56.4%), as Figure 9 shows, lived in married couple households at a rate similar to the native born (57.5%).

Given the nativity-driven differentials in age, marital status, and household types, one also would expect childbearing to be higher among the foreign-born than the native born. In the 2012 ACS, foreign-born women between the ages of 15 and 50 were significantly more likely than their native-born counterparts to report the birth of a child in the past 12 months (8.5% vs. 5.3%). Moreover, the rates of childbearing were higher among the foreign-born than the native-born—regardless of whether the women were married (9.9% vs. 7.2%) or unmarried (6.3% vs. 3.8%) (Table 8).<sup>3</sup> In part for this reason, foreign-born households and families—irrespective of citizenship status—were larger on average than native born households in 2012 (Table 9).

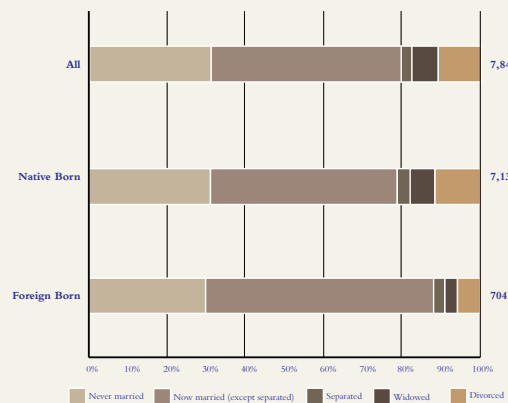
<sup>3</sup> It should be noted here that foreign-born women between the ages of 15 and 50 were far less likely to be unmarried (38% versus 55%) and far more likely to be married (62% vs. 45%) than their native-born counterparts.

Figure 7  
AGE OF THE NORTH CAROLINA POPULATION BY NATIVITY AND CITIZENSHIP STATUS, 2012



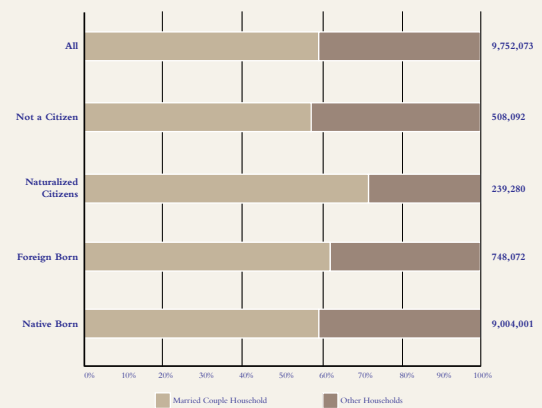
Source: ACS, 2012.

Figure 8  
MARITAL STATUS OF NORTH CAROLINA POPULATION BY NATIVITY, 2012



Source: ACS, 2012.

Figure 9  
HOUSEHOLD TYPES IN NORTH CAROLINA BY NATIVITY AND CITIZENSHIP STATUS, 2012



Source: ACS, 2012.



Table 8

NORTH CAROLINA WOMEN 15-50 WHO HAD A BIRTH IN PAST 12 MONTHS BY MARITAL STATUS AND NATIVITY, 2012

<i>Marital Status</i>	<i>Total</i>	<i>Native Born</i>	<i>Foreign-born</i>
<b>All Women</b>	2,385,018	2,127,171	257,847
<b>% Births</b>	5.7	5.3	8.5
<b>Now Married</b>	1,123,364	964,132	159,232
<b>% Births</b>	7.6	7.2	9.9
<b>Unmarried</b>	1,261,654	1,163,039	98,615
<b>% Births</b>	4.0	3.8	6.3

Source: ACS, 2012 (B13008).

Table 9

NORTH CAROLINA HOUSEHOLD TYPES AND SIZES BY NATIVITY AND CITIZENSHIP STATUS

<i>Nativity/ Citizenship Status</i>	<i>Married Couple</i>	<i>Other</i>	<i>Average Household Size</i>	<i>Average Family Size</i>
<b>Total</b>	57.5	39.8	2.55	3.12
<b>Native Born</b>	57.3	40.0	2.47	3.05
<b>Foreign-born</b>	61.0	37.5	3.46	3.86
<b>Naturalized Citizen</b>	70.9	27.9	3.04	3.56
<b>Non-Citizen</b>	56.4	42.0	3.73	4.06

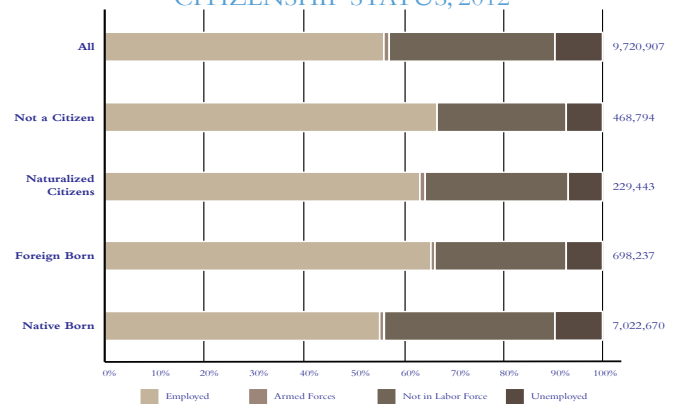
Source: ACS, 2012 (S0501).

2.2.4. Labor force participation, Industry, and Occupation

In 2012, according to ACS statistics, immigrants participated in the civilian labor force at a much higher rate than the native-born (71% vs. 61%). As Figure 10 shows, they also were employed in the North Carolina economy at a higher rate than their native born counterparts. This was true regardless of citizenship status. Naturalized citizens (68% and 63%, respectively) and non-citizens (72% and 66%, respectively) alike had higher civilian labor force participation and employment rates than the native born (61% and 54%, respectively) in 2012.

Moreover, as Table 10 shows, the foreign-born (88.3%), and especially those who were non-citizens (90.5%), was employed as wage and salary workers at a significantly higher rate than their native born counterparts (79.0%). Conversely, the foreign-born (5.9%) was less likely than the native born (15.9%) to be employed as government workers. The two groups were self-employed in their own not incorporated businesses and as unpaid family workers at roughly the same rates.

Figure 10  
EMPLOYMENT STATUS OF NORTH CAROLINA POPULATION BY NATIVITY AND CITIZENSHIP STATUS, 2012



Source: ACS, 2012.

Table 10  
NORTH CAROLINA CLASS OF WORKER BY NATIVITY AND CITIZENSHIP STATUS, 2012

Class Worker	Total	Native Born	Foreign-born	Naturalized	
				Citizen	Non-Citizen
<b>Civilian Employed Population 16+</b>	4,268,510	3,814,956	453,554	143,665	309,889
<b>Private Wage &amp; Salary workers</b>	79.0%	77.9%	88.3%	83.6%	90.5%
<b>Government Workers</b>	14.9%	15.9%	5.9%	11.0%	3.5%
<b>Self Employed in own not incorporated business</b>	6.0%	6.0%	5.7%	5.1%	5.9%
<b>Unpaid family worker</b>	0.2%	0.2%	0.2%	0.3%	0.1%

Source: ACS 2012 (S0501).

As Figure 11 indicates, the foreign-born in general, and immigrants who were not citizens in particular, were far more likely than the native-born to be employed in construction and manufacturing industries in 2012. They were also more likely than the native-born to be employed in service occupations (24% vs. 17%), natural resource, construction, and maintenance occupations (19.8% vs. 8.5%), and production, transportation, and material moving occupations (17.6% vs. 12.7%) (Figure 12). These were the industries and occupations that propelled growth in the North Carolina economy during both the 1990s and the 2000s (Walden, 2008).

citizens were engaged in work that paid on average higher wages or salaries (\$77,253) than the native born earned (\$63,197). As Figure 12 shows, naturalized citizens were employed in management positions at significantly higher rates than the native born, which largely accounts, in all likelihood, for the earnings differential.

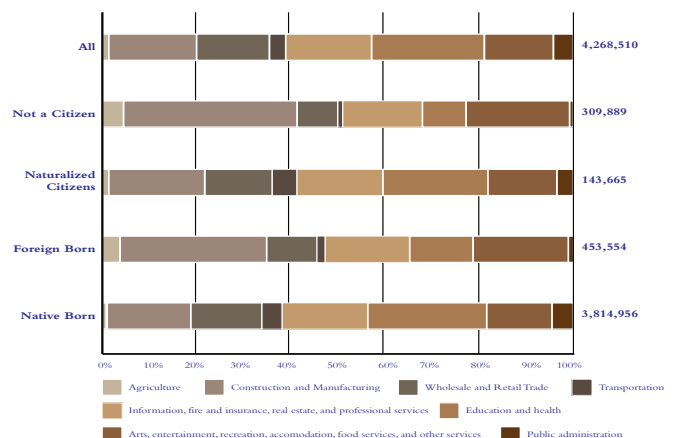
Partly as a function of age differentials, the foreign-born was far more likely to rely on earnings and less likely to rely on social security and retirement income than the native-born in 2012. Given often-expressed concerns about perceived immigrant costs, as Figure 14 shows, reliance on means-tested sources

2.2.5 Sources of Income, Health Coverage, and Poverty Status

In 2012, the mean earnings of the foreign-born (\$58,899) were lower than the mean earnings of the native-born (\$63,197). But the average earnings statistic for the foreign-born masks the enormous disparity in earnings between immigrants who were naturalized citizens (\$77,253) and those who were not citizens (\$48,002). The earnings gap between these two groups was \$29,251 in 2012.

Naturalized citizens had higher levels of educational attainment and therefore were more likely to be employed in higher wage jobs relative to their non-citizen counterparts who had low levels of educational attainment and were more likely to be concentrated in low wage work (Figure 13). In fact, naturalized

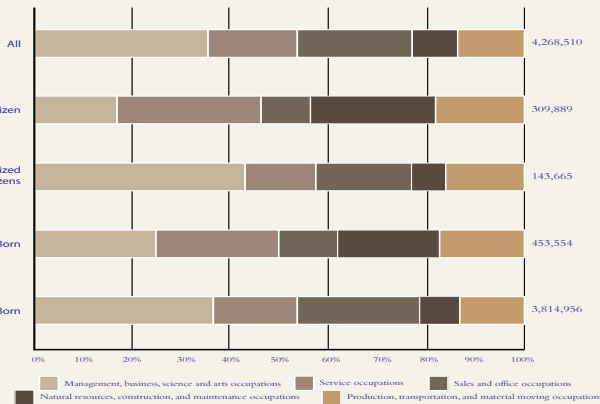
Figure 11  
NORTH CAROLINA INDUSTRY PROFILE BY NATIVITY AND CITIZENSHIP STATUS, 2012



Source: ACS, 2012.

Figure 12

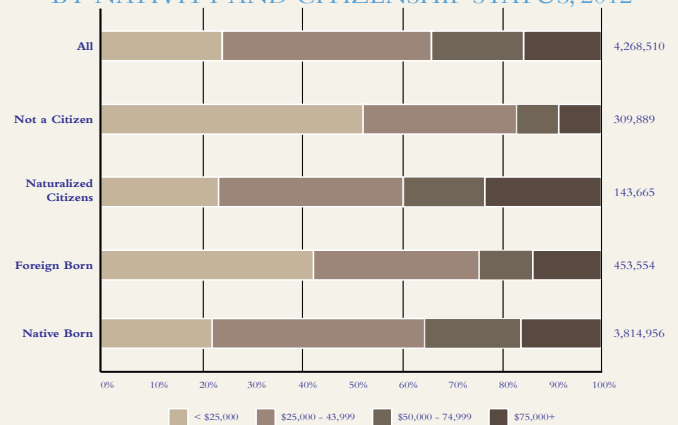
NORTH CAROLINA OCCUPATIONAL PROFILE BY NATIVITY AND CITIZENSHIP STATUS, 2012



Source: ACS, 2012.

Figure 13

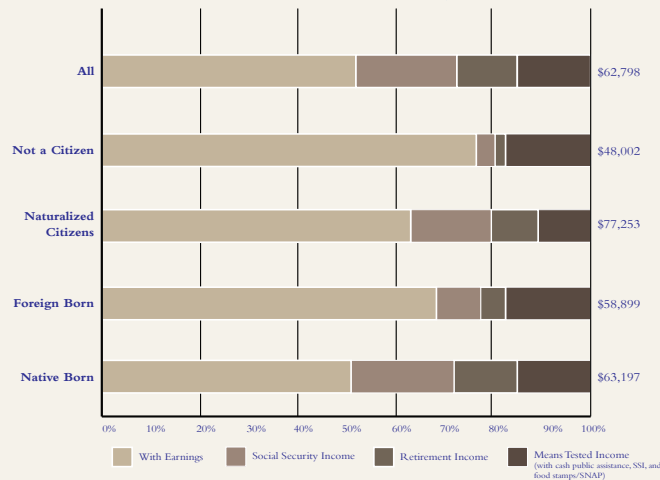
EARNINGS IN THE PAST 12 MONTHS FOR FULL TIME, YEAR ROUND NORTH CAROLINA WORKERS BY NATIVITY AND CITIZENSHIP STATUS, 2012



Source: ACS, 2012.

Figure 14

SOURCES OF INCOME IN PAST 12 MONTHS IN NORTH CAROLINA BY NATIVITY AND CITIZENSHIP STATUS, 2012



Source: ACS, 2012.

of income (i.e., Supplemental Security Income, cash public assistance, and food stamps/SNAP) did not vary by either nativity or citizenship status. Only one-fifth of the native born (22.5%) and the foreign-born (23.4%) relied on such sources of income in 2012. Among immigrants, reliance on means-tested sources of income was slightly higher among non-citizens (22.1%) than naturalized citizens (14%) but no higher than the native born rate (22.5%).

In 2012, the foreign-born also was less likely than the native-born to rely on public sources for health insurance coverage (23.7% vs. 39.2%). Among immigrants, naturalized citizens

(28.5%) were more likely than non-citizens (18.9%) to rely on public coverage (Table 11). Overall, the share of immigrants with insurance coverage (51.6%) was significantly lower than the share of the native born with insurance coverage (86.1%). However, immigrants who were insured (85.8%) were more likely than the native born who were insured (74.6%) to rely on private sources of coverage.

An area of major concern for The State, as Table 11 shows, is the high percentage of the foreign-born who were uninsured (48.4%)—a statistic heavily influenced by the relatively large share of non-citizens with no health coverage at all (61.8%).

Table 11  
HEALTH INSURANCE COVERAGE STATUS IN NORTH CAROLINA BY CITIZENSHIP STATUS, 2012

<i>Group</i>	<i>Population Estimate</i>	<i>With Health Insurance (%)</i>	<i>With Private Insurance (%)</i>	<i>With Public Insurance (%)</i>	<i>With No Coverage (%)</i>
<b>Total Population</b>	9,522,529	83.4	75.2	38.5	19.9
<b>Native Born</b>	8,111,742	86.1	74.6	39.2	13.9
<b>Foreign-born</b>	740,787	51.6	85.8	23.7	48.4
<b>Naturalized Citizen</b>	235,646	80.5	86.6	28.5	19.5
<b>Noncitizen</b>	505,141	38.2	85.0	18.9	61.8

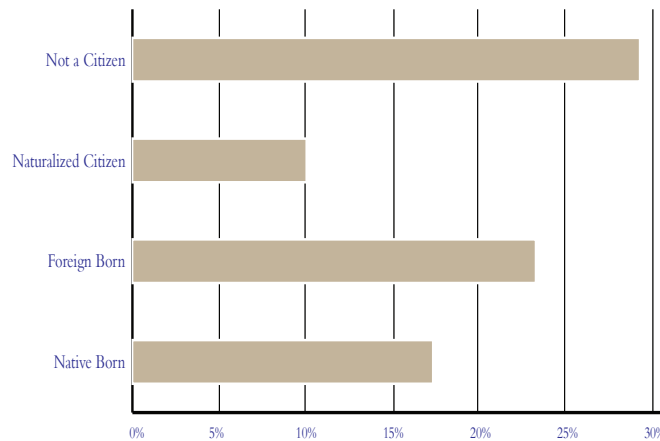
Source: ACS, 2012 (B27020).

Table 12  
POVERTY RATES FOR FAMILIES FOR WHOM POVERTY IS DETERMINED BY NATIVITY & CITIZENSHIP STATUS, 2012

<i>Nativity/ Citizenship Status</i>	<i>All Families</i>	<i>All Families with Children &lt; 18</i>	<i>Married Couples</i>	<i>Married Couples with children &lt; 18</i>	<i>Female-headed households</i>	<i>Female Headed Household with children &lt; 18</i>
<b>All</b>	13.4	21.8	6.3	9.8	36.0	45.6
<b>Native Born</b>	12.4	20.4	5.2	7.7	34.9	44.4
<b>Foreign-born</b>	24.0	31.1	17.2	22.0	49.8	57.2
<b>Naturalized Citizen</b>	10.5	13.9	7.7	9.3	22.5	28.3
<b>Non-Citizen</b>	33.0	39.3	25.0	29.7	61.2	65.6

Source: ACS 2012 (S0501).

Figure 15  
PERCENT OF NORTH CAROLINA POPULATION LIVING BELOW POVERTY LEVEL IN PAST 12 MONTHS BY NATIVITY AND CITIZENSHIP STATUS, 2012



Source: ACS, 2012.

By comparison, only 13.9% of the native born population was uninsured in 2012.

In part as a function of disparities in education and earnings, the poverty rate was higher among foreign-born individuals (23.2%) than native-born individuals (17.3%) in 2012 (Figure 15). Disaggregated by citizenship status, immigrants who were not citizens had a much higher poverty rate (29.6%) than their naturalized citizen counterparts whose poverty rate (10.0%) was significantly lower than the native born poverty rate (17.3%).

As noted previously, non-citizens had on average lower levels of educational attainment and filled many of the low wage jobs in The State's economy. As such, they were in essence members of The State's working poor population. That is, North Carolinians who worked every day but did not earn enough money to escape poverty—a group often referred to in public policy circles as the deserving poor. Contrary to an often-expressed opinion in the immigration reform debate, they were not members of The State's jobless poor—a group often accused of intentionally relying on the government dole for their existence and therefore dubbed the undeserving poor.

The same pattern applies for family level poverty in The State. In 2012, the poverty rate was higher among foreign-born families (24%) than native-born families (12.4%). As Table 12 shows, this was the case for all families, married couples, married couples with children under 18, female-headed families, and female-headed families with children under 18. Family poverty rates were highest among female-headed families irrespective of nativity and citizenship status. Families headed by females who were not citizens had the highest poverty rates. It should be noted here, however, that the incidence of female-headed households was much lower among foreign-born than native-born households.

### **2.3 Summary**

Based on the foregoing descriptive analyses, immigrants do not appear to be nearly the burden on our society as some would have us believe. We now turn our attention to an empirical analysis which will quantify the costs and benefits of North Carolina's immigrants.

## **3.0 ESTIMATING IMMIGRANT ECONOMIC AND FISCAL IMPACTS**

In this section, we present our analytical framework for estimating immigrant impacts on the North Carolina economy, describe the demographic targets in our economic analyses, identify the sources of data used in this phase of the research, and present findings regarding the net impact of immigrants on The State's economy.

We address three specific issues:

- The impact of immigrant consumer spending on The State and its communities;
- The net balance of immigrants' contributions and costs on The State budget; and
- The effect of immigrant workers on total economic output and competitiveness of The State.

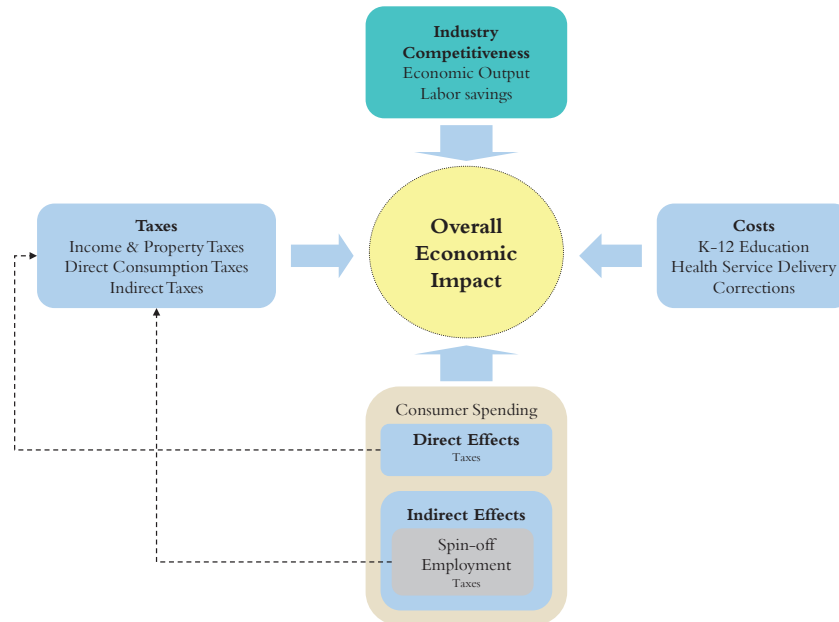
### **3.1 Analytical Framework**

To address these three issues, we employ a framework that is very similar to the one we used in our prior research on Hispanic and immigrant impacts (Kasarda and Johnson, 2006; Kasarda, et.al., 2007; Appold and Johnson, 2013). It is reproduced in Figure 16.

On the contributions side, we focus largely on benefits that accrue to The State from three sources:

- Consumer spending: the total immigrant after-tax personal income available for local spending on goods and services. Such spending has both direct and indirect effects on North Carolina business revenue and employment. Immigrant purchases also contribute to a host of state and local taxes, including, among others, sales tax, highway use tax, motor fuel tax, alcohol tax, and cigarette tax.
- Payroll and property taxes: immigrants directly contribute to North Carolina's revenue base through taxes on their earnings and property.
- Industry competitiveness: immigrant workers benefit North Carolina industries by augmenting the labor

Figure 16  
 CONCEPTUAL FRAMEWORK FOR ASSESSING THE ECONOMIC IMPACT OF IMMIGRANTS IN NORTH CAROLINA



Source: Authors' rendition.

supply and economic output at competitive wages and salaries.

On the cost side, as Figure 16 shows, we estimate the financial impact of immigrants on three major public costs that are typically considered in immigrant impact studies: K-12 education, health service delivery, and public safety.

For much of our analysis, we utilized an input-output model known as IMPLAN. This model is based on inter-industry purchasing patterns, consumption patterns, and local production, retail, and service availability. IMPLAN traces consumer spending through over 500 sectors of North Carolina's economy to generate a variety of economic impacts at The State, metropolitan area, and county levels, as well as for various demographic groups.<sup>4</sup>

### 3.2 Demographic Targets

Our primary focus is on the economic impact of immigrants on the state of North Carolina. However, we thought it was important to broaden the analysis to include other demographic groups. Our rationale for broadening the economic impact analysis is as follows.

In the policy debate on immigration reform, it is often argued that immigrants cost more than they contribute to The State and our nation. Implicit in this argument is the previously untested assumption that other groups (e.g., natives) pay their own way. Our goal in this research therefore is to inform the immigration reform policy debate by estimating the economic impact of not only immigrant newcomers but also the native born and the major race/ethnic groups that make up The State's population. More specifically, for the purpose of this report, we categorized North Carolinians by lifetime migration status and by race/ethnicity.

With regard to lifetime migration status, we sorted North Carolinians into three basic categories: immigrants and two sub-groups of the native-born<sup>5</sup>--domestic imports and the North

<sup>4</sup> The IMPLAN model is broadly used in economic impact analyses. It uses data provided by the U.S. Bureau of Economic Analysis, the Bureau of Labor Statistics, and various state and federal agencies. The model generates, among other results, the number of jobs, labor income, and taxes created by a specified input. It also generates economic output, roughly equated to business revenue, resulting from a group's direct, indirect, and induced economic impacts.

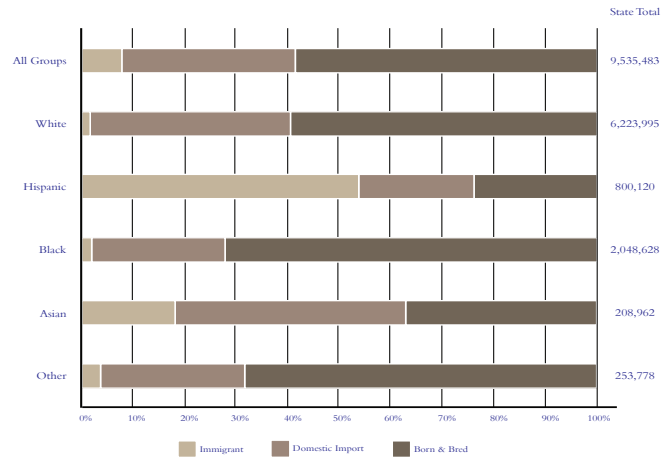
<sup>5</sup> Natives are those who were born in the United States, a U.S. territory (Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands), or the Northern Mariana Islands) or

Carolina born and bred—which are defined as follows:

- Immigrant refers to the foreign-born who live in North Carolina. This group includes naturalized U.S. citizens, lawful permanent residents, temporary migrants (such as students), humanitarian migrants (such as refugees), and persons not legally present in the United States. The latter category may have entered the U.S. illegally (unauthorized immigrants) or they may have overstayed their visas (visas over stayers).<sup>6</sup>
- Domestic imports are those who are U.S. citizens by birth and who live in North Carolina but who were not born in The State.
- Born and bred refers to those who were born in North Carolina and who still live in The State.<sup>7</sup>

For the purpose of our economic impact analysis, we also classified the North Carolina population into five broad racial/ethnic groups: non-Hispanic whites, non-Hispanic blacks, non-Hispanic Asians, non-Hispanic “others,” and Hispanics. We follow the U.S. Bureau of the Census in defining Hispanics as those who classify themselves in one of the specific Hispanic origin categories: Mexican, Puerto Rican, Cuban, Dominican, as well as Central American or South American (Spanish-speaking countries). Persons who identify themselves as “Other Spanish/Hispanic” are those whose origins are in Spain or who identify themselves generally as Spanish, Spanish-American, Hispanic, Hispano, Latino, and so on. Hispanics may be of any race and many North Carolina Hispanics are classified as being members of a residual race category. Although Hispanic is an ethnic designation, we treat it here as a racial category. We also followed the Census Bureau practice of defining Asians as those who classify themselves as such.

Figure 17  
LIFETIME MIGRATION STATUS OF NORTH CAROLINA'S MAJOR RACE/ETHNIC GROUPS, 2010



Source: ACS, 2012.

### 3.3 Sources of Data

We employed a number of estimation procedures to disaggregate the 2010 North Carolina population by lifetime migration status and race/ethnicity.<sup>8</sup> The resulting data are reproduced in Figure 17. It can be summarized as follows.

Non-Hispanic whites were the largest racial group (6,223,995), accounting for 65.3 percent of The State’s population. Well over half were NC born and bred (59.4 percent or 3,699,185) and 38.7 percent were domestic imports (2,407,522). Only 1.9 percent were immigrants (117,284).

Non-Hispanic blacks were the second largest racial group (2,048,628), making up 21.5 percent of the North Carolina population. Almost three quarters were NC born and bred (72.2 percent or 1,478,994). One quarter was domestic imports (25.7 percent or 525,849). Only 2.1 percent were immigrants (43,785).

In 2010, there were 800,120 Hispanics in North Carolina,

abroad to at least one parent who was a U.S. citizen. See Larsen (2004).  
<sup>6</sup> These international immigrants form a diverse set of people from the elderly coming to join established adult children to young people running serious risks to their safety for the prospect of a better job to well-paid multinational executives who may remain in the U.S. for only a few years to refugees seeking to escape persecution. All of these live in North Carolina.  
<sup>7</sup> Because migrants are often young adults who form or expand families, it is important to explain how the children of migrants are handled in our analysis. If at least one adult – the householder and/or spouse – is foreign-born, then all members, including children born in the U.S., are classified as members of an immigrant household. Similarly, if at least one adult was born in another state and none is an immigrant, all members are classified as members of a domestic import household. Children born in North Carolina are classified as a part of the born and bred population once they leave the parental household.

<sup>8</sup> The Bureau of the Census regularly measures the race, nativity, and ancestry of U.S. residents through surveys. For each variable, direct questions are posed to respondents. The most reliable measures are part of the decennial Census but several measures have been partially or wholly transferred to the annual American Community Survey (ACS) in recent years. Accordingly, information on place of birth and ancestry was not collected in the 2010 Census. Such information is now collected as a component of the ACS. Because the sample for a single year wave (2010) of the ACS may be too small for detailed analysis in North Carolina, we based our analyses on the direct measures of nativity and ancestry for the Census years 2000 and earlier but constructed our own estimates of the immigrant population for our analysis of 2010. (Race is measured directly in all data used.) Using the 2006-2010 ACS sample, these estimates were constructed by measuring the proportion of five broad ethnic/racial groups – Hispanics, non-Hispanic whites, non-Hispanic Blacks, non-Hispanic Asians, and non-Hispanic others – by five-year age group which are immigrants and then, assuming those proportions to be nearly constant over the short term, adjusting the total to be consistent with 2010 Census counts of each of the five groups.



representing 8.4 percent of the total population. Over half were immigrants (53.8 percent or 430,139); 23.9 percent were born and bred in North Carolina (190,901); and 22.4 percent were domestic imports (179,080).

Asians comprised 2.2 percent of the North Carolina population (208,962). Almost seven in ten were immigrants (69.2% or 144,635); 13.9 percent were NC born and bred (29,026); and 16.9 percent were domestic imports (35,301).

Non-Hispanic “others” made up 2.7 percent of The State’s population (253,778). Only 3.7 percent of this group was immigrants (9,276). The majority was NC born and bred (68.3 percent or 173,314). The remainder was domestic imports (28.0 percent or 71,188).

Buying power data for these various groups were the primary inputs to the IMPLAN model to estimate economic contributions. There are no direct measures of the local (county) buying power, which is defined by the U.S. Bureau of Economic Analysis (BEA) as “personal consumption expenditures.” We, therefore, estimated buying power by using county-level estimates of 2010 aggregate personal income obtained from the BEA Regional Economic Information System.<sup>9</sup> The income measures were weighted by the proportion of the adult population in each county in each racial and lifetime migration status category and by their estimated earnings differential. The group personal income estimates were then adjusted for BEA state-level estimates of personal current taxes (which is mainly Federal and State income taxes and does not include consumption taxes<sup>10</sup>) to yield an estimate of disposable income (the total after-tax income received by persons that is available to persons for spending or saving) and BEA national estimates of the proportion of disposable income devoted to consumer expenditures on goods and services.

Personal income was reduced by 5.8 percent for Federal taxes and 3.0 percent for North Carolina state and local income and non-real estate property taxes. In North Carolina, disposable income is an estimated 91.3 percent of total personal income, higher than the national average. Disposable income is further adjusted for savings (5.6 percent of 2010 disposable income) and interest payments (2.2 percent of 2010 disposable income), as well as contributions to government social insur-

ance programs (mainly Social Security and Medicare). Factoring in these adjustments, buying power is estimated to be 90.7 percent of disposable income and 82.8 percent of total personal income.<sup>11</sup>

A plausible method would be to distribute income proportionally among population groups. We know, however, that, due to differences in sector, occupation, and other factors, sub-group earnings often differ significantly from those of the North Carolina population as a whole. We therefore introduced a county-specific relative earnings differential, calculated from the 2006–2010 ACS sample data, into the allocation. Data on income and population for each of the three lifetime migration statuses and five racial/ethnic groups were used to create the relative weighting factor.

Generally, disposable personal income is spent locally. However, North Carolina’s immigrants (especially the more recently arrived) typically remit substantial portions of their income back to their country of origin.

Research on immigrants in “expansion states” in the southeastern U.S. (De Vanconcelos, 2004; Suro, et. al., 2005; Woodward, 2005; Council on Hemispheric Affairs, 2011) has estimated that remittances averaged 10 percent of disposable income. The proportion of income remitted is higher among very recent arrivals but over the last several years, the rate of remittance has been estimated to be dropping for three reasons.

First, family reunification and formation in the U.S. has reduced the motivation to remit. Second, the increased costs of illegal entry imply a need to repay those who aided entry, leaving less for family members. Third, the recession has diminished earning power resulting in a decline in total funds sent.

Emblematic of the impact of these three forces, remittances from the U.S. to Latin America dropped 12.4 percent by 2010 from their peak in 2007, even as the immigrant population continued to grow. We therefore deflated Hispanic and immigrant buying power by 7.5 percent to account for likely remittances.

Our data on expenditures for public K–12 education were taken from the information about the 2010–2011 school year for North Carolina in the 2012 edition of the National Center for Education Statistics’ Digest of Education Statistics.<sup>12</sup> We assumed that the percentage of expenditures attributable to each

<sup>9</sup> The BEA defines personal income as the sum of compensation received by employees, supplements to wages and salaries, proprietors’ income (with inventory valuation adjustment and capital consumption adjustment), rental income, personal income receipts on assets, and personal current transfer receipts, less contributions for government social insurance. This differs from the definitions of income used by the Bureau of the Census, the Internal Revenue Service, and the Consumer Expenditure Survey.

<sup>10</sup> Consumption-based taxes include property tax for housing services and sales tax for other goods and services.

<sup>11</sup> The BEA and Census of Government report somewhat different figures for state and local taxes. We have not been able to fully reconcile the differences. For the most part, our analysis of tax levels relies on the Census of Government figures, adjusted and refined using North Carolina Department of Revenue figures where necessary.

<sup>12</sup> Digest of Education Statistics. Other data sources differ somewhat in their estimates in enrollment., revenue, and expenditure



racial group was proportional to its representation in the enrolled student population.

To calculate net healthcare delivery costs, we used our estimates of The State's population by race/ethnicity, Medical Expenditure Panel Study (MEPS) 2010 data for the nation on health service usage and payments by race/ethnicity, and 2010 North Carolina-specific cost adjustments available through the MEPS. The Centers for Medicare and Medicaid Services (CMS) information on 2010 health service expenditure costs and sources of aggregate payments were used to estimate The State's share of the public costs associated with each demographic group.

The racial breakdown was necessary because there are significant differences in the propensity to use services, in the mean cost of service, and in the degree of reliance on public sources of payment. Hispanics, for example, have a relatively high dependence on public funding for healthcare services. But, they use such services less frequently than most other major racial/ethnic groups and, when they do, incur relatively lower costs. This may reflect their younger age distribution and, despite their low average income, a propensity to self-pay at least a portion of their costs (Kasarda and Johnson, 2006).

We used data from the Census of Government on state and local expenditures for police and fire protection, corrections, safety inspections, and the judiciary to estimate public safety expenditures for 2010–2011. Police, fire, inspection, and judicial costs were based on the proportions in each demographic category in the population. For our estimate of costs to The State criminal justice system, we began with information on the number of individuals in state prison by race/ethnic group supplied by North Carolina Department of Public Safety, Office of Research and Planning. We then calculated the percentage of each lifetime migration status group that was in prison using our data on the percent foreign-born in each group. State correction costs were apportioned on the basis of the characteristics of the prison population. Local jail costs were apportioned using national data on the relationship between prison and jail populations for each racial/ethnic group.

### **3.4 Findings**

We present findings for all three lifetime migration status and five race/ethnic groups. Our primary focus, however, is on the results for immigrants and Hispanics, the two groups that

garner most of the attention in the immigration reform debate.

#### **3.4.1 Estimates of Economic Contributions**

Figures 18, 19, and 20 summarize the buying power of North Carolina's three lifetime migration status and five race/ethnic groups. The data for these demographic groups are aggregated at four geographical scales: The State, major metropolitan regions, micropolitan areas, and rural areas.

North Carolinians collectively had a combined \$273.9 billion in buying power (after tax income modified as described above) in 2010. Paralleling the distribution of The State's population, as Figures 18 and 19 show, this buying power was highly concentrated in The State's metropolitan areas (74.2%), with substantially smaller concentrations in micropolitan (19.2%) and rural (6.6%) areas. Immigrant buying power, as Figures 18 and 19 also reveal, was more highly concentrated in The State's metropolitan areas than any of the other life time migration status and race/ethnic groups.

Looking more generally at the distribution of buying power across the various lifetime migration status and race/ethnic groups, Figures 18 and 19 reveal that:

Asians (90.4%), immigrants (83.8%), Hispanics (80.4%), domestic imports (79.8%), and Blacks (77.0%) had above average and Whites (73.3%), the NC bred and born (67.3%), and all other races (60.4%) had below average concentrations of buying power in The State's metropolitan areas.

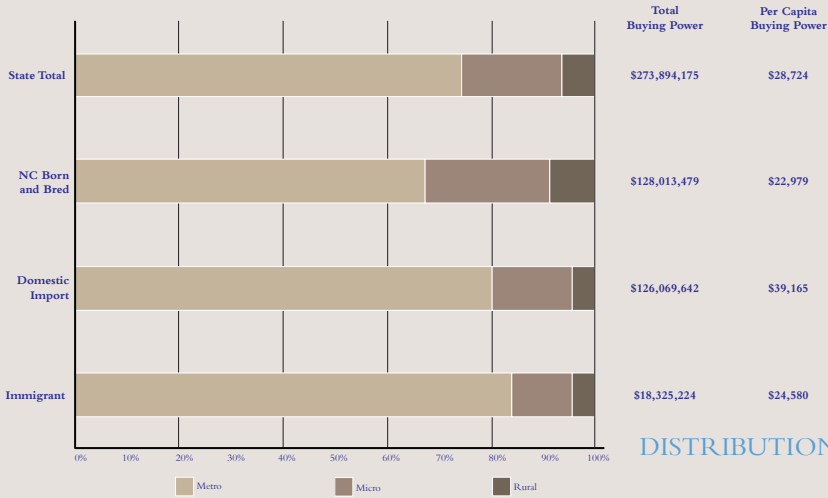
All other races (31.3%), Whites (19.9%), and the NC bred and born (24.0%) had above average concentrations and Blacks (16.2%), domestic imports (15.4%), Hispanics (14.3%), immigrants (11.9%), and Asians (8.4%) had below average concentrations of buying power in NC's micropolitan areas.

The NC born and bred (8.8%), all other races (8.3%), Whites (6.8%), and Blacks (6.8%) had above average and Hispanics (5.3%), domestic imports (4.8%), immigrants (4.3%), and Asians (1.2%) had below average concentrations of buying power in rural areas.

In three of The State's metropolitan areas (Durham, Raleigh and Charlotte), immigrants were responsible for between 9% and 10% of total buying power. They were responsible for between 5% and 7% of total buying power in seven of The State's metropolitan areas (Winston-Salem, Fayetteville, Greens-

Figure 18

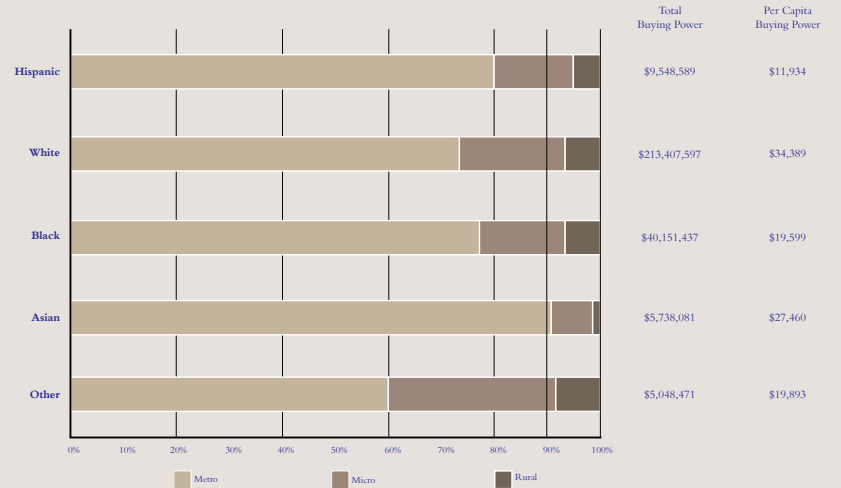
DISTRIBUTION OF NORTH CAROLINA BUYING POWER BY MIGRATION STATUS AND COMMUNITY TYPE



Source: ACS, 2012.

Figure 19

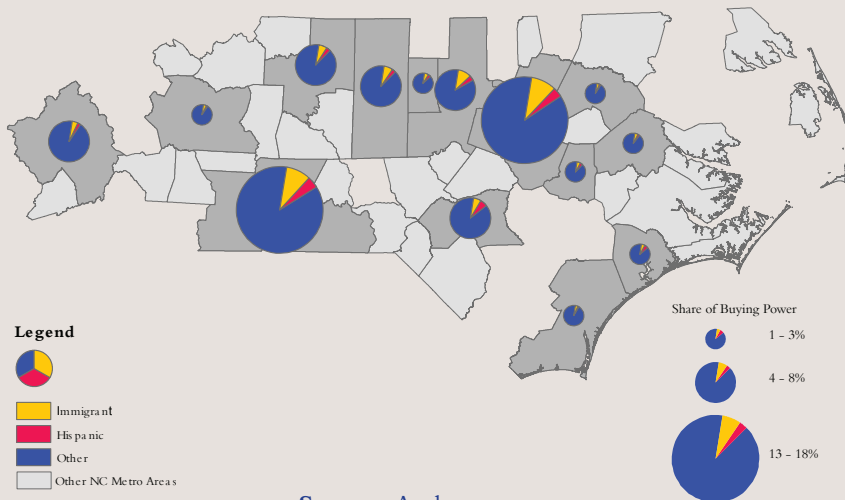
DISTRIBUTION OF NORTH CAROLINA BUYING POWER BY RACE AND COMMUNITY TYPE, 2012



Source: ACS, 2012.

Figure 20

CONSUMER BUYING POWER IN NORTH CAROLINA METROPOLITAN AREAS, 2010



Source: Authors.

boro, Burlington, Goldsboro, Greenville and Jacksonville). In the remaining three metropolitan areas (Hickory, Asheville, and Rocky Mount), immigrants accounted for between 1% and 4% of total buying power, as illustrated in Figure 20.

Hispanics, as Figure 20 also reveals, accounted for about 6% of total buying power in three of The State's metropolitan areas (Winston-Salem, Jacksonville and Fayetteville). They were responsible for between 2% and 5% of total buying power in each of the remaining metropolitan areas in The State.

The buying power of the various lifetime migration and racial/ethnic status groups stems largely, but not exclusively, from their participation in the labor market. Thus, the objective here was to use the IMPLAN model to trace the expenditure of earnings by these various groups throughout the North Carolina economy, highlighting the direct and indirect effects on business revenue, spinoff job creation, and tax contributions.<sup>13</sup> Our findings appear in Tables 13 and 14.

North Carolina immigrants had an estimated \$18.33 billion in buying power (after tax income modified as stated above) in 2010. Even after discounting their buying power to account for remittances, savings, and interest payments, immigrant purchases rippled through The State's economy, creating an overall economic impact of \$19.76 billion in 2010 (Table 13).<sup>14</sup>

The indirect effects of immigrant spending in North Carolina included 171,000 spin-off jobs and \$6.44 billion in additional labor income in 2010. Immigrant spending also was responsible for \$1.4 billion in additional state tax receipts, \$864 million in federal taxes, and \$693 million in social insurance (mainly Social Security and Medicare) payments (Table 14).

On a per capita basis, as Table 13 shows, the consumer spending impact of immigrants (\$26,518) was greater than consumer spending impact of the NC born and bred (\$24,745), Blacks (\$21,177), all other races (\$18,199), and Hispanics (\$12,895). The consumer spending impact of immigrants (\$26,518) was less than the consumer spending impact of domestic imports

(\$42,383), Whites (\$36,971), and Asians (\$29,716).

Hispanics, as Table 13 shows, had an estimated \$9.5 billion in buying power in 2010, which rippled through the North Carolina economy and created an overall economic impact of \$10.3 billion. The indirect effect of Hispanic spending included 92,000 spin-off jobs and \$3.4 billion in additional labor income. Hispanic spending also was responsible for \$740 million in additional state tax receipts, \$444 million in federal taxes, and \$367 million in social insurance payments (Table 14). On a per capita basis, the consumer spending impact of Hispanics (\$12,895) was lowest of all of race/ethnic and life-time migration groups (Table 13).

### 3.4.2 Estimates of Fiscal Impacts

On the cost side, we estimated the financial impact of immigrants on public sectors that are most often discussed in demographic impact studies: 1) public elementary and secondary education, 2) health services delivery, and 3) public safety (including police, fire, corrections, inspections, and the administration of the judicial system). On the contribution side, we considered the taxes paid directly and indirectly by the various lifetime migrant status and race/ethnic groups through their consumer purchases. Our estimate of the fiscal balance is the difference in tax contributions on the one hand and the cost of essential services on the other.

The costs of essential services are closely tied to the size and composition of the population. In 2010, close to half (44.9 percent) of all state and local expenditures (\$67.31 billion -- 2010-2011 data) went to cover the costs of K-12 education (19.5 percent), health services (15.0 percent), and public safety (9.3 percent). Some of these costs were partially offset by user fees and transfers from the Federal government.<sup>15</sup>

In 2010, North Carolina expended \$18.8 billion on K-12 education, health services, and public safety (Table 15). Only 12.5% of these expenditures supported North Carolina's immigrant population (\$2.3 billion). Another 5.2% supported His-

<sup>13</sup> A simple example is perhaps informative here. Most of every dollar earned in, say, the construction industry, is spent on consumer goods—housing, food, health care, transportation, and so on. Thus, the need for a construction worker implies a need for the real estate sector, food stores and restaurants, automobile mechanics, and so on to serve him or her. Because North Carolinians serve each other, these calculations, when added together, entails a partial double-counting of economic activity. Accordingly, these calculations are most meaningful in examining the total impact of groups, such as migrants, which are “added” to The State’s economy.

<sup>14</sup> In estimating the economic impact of consumer spending, we used Implan’s default regional purchase coefficients for North Carolina, which determine the degree to which state-produced goods and services are consumed, and assumed a standard consumption packet for households with incomes in the range of the median total income, including non-cash benefits, for each group. Health care is a major component of the standard consumption packet. However, as we discuss below, Hispanics differ from that standard packet by consuming less health care but paying for a greater proportion of it directly.

<sup>15</sup> Our accounting omits 55.1 percent of all state and local expenditures. Ultimately, all North Carolinians share in those costs. However, we omit them from our analysis because it isn’t clear how these costs should be allocated at the margin. The state’s extensive network of rural roads, for example, does not primarily serve new North Carolinians. Moreover, given the predominant pattern of housing filtering, it may be that low-income in-migrants preserve existing investments in infrastructure by occupying housing which might otherwise be vacant, thereby extending the productive lives of such infrastructure. Even in the case of education, where costs are more closely tied to the number of pupils, an influx of immigrants could prevent schools from dipping below the threshold required for their operation, thereby providing a hidden benefit to native parents and their children.

Table 13  
DIRECT EFFECTS OF CONSUMER SPENDING OF SELECTED DEMOGRAPHIC GROUPS

<i>Demographic Group</i>	<i>Total Population</i>	<i>Buying Power (\$000) (per capita)</i>	<i>Economic Impact (\$000) (per capita)</i>
<b>All</b>	9,535,483	\$273,894,175 (\$28,724)	
<b>Race/Ethnic Status</b>			
<b>Hispanic</b>	800,120	\$9,548,589 (\$11,394)	\$10,317,510 (\$12,895)
<b>White</b>	6,223,995	\$213,407,597 (\$34,289)	\$230,110,269 (\$36,971)
<b>Black</b>	2,048,628	\$40,151,437 (\$19,599)	\$43,384,719 (\$21,177)
<b>Asian</b>	208,962	\$5,738,081 (\$27,460)	\$6,209,560 (\$29,716)
<b>Other</b>	253,778	\$4,274,261 (\$16,843)	\$4,618,455 (\$18,199)
<b>Lifetime Migration status</b>			
<b>NC Born&amp; Bred</b>	5,571,420	\$128,013,479 (\$22,977)	\$138,032,649 (\$24,745)
<b>Domestic Import</b>	3,218,940	\$126,069,642 (\$39,165)	\$136,428,364 (\$42,483)
<b>Immigrant</b>	745,123	\$18,325,224 (\$24,594)	\$19,759,471 (\$26,518)

**Source:** Authors' analysis of BEA and Census data using Implan software

\*Buying power adjusted for estimated remittances.

Indirect state and local taxes adjusted for double counting.

Table 14  
INDIRECT EFFECTS OF CONSUMER SPENDING OF SELECTED DEMOGRAPHIC GROUPS

<i>Demographic Group</i>	<i>Spin-off employment (000 jobs)</i>	<i>Spin-off Labor Income (\$000) (per capita)</i>	<i>Spin-off State &amp; Local Taxes (\$000) (per capita)</i>	<i>Spin-off Federal Taxes (\$000) (per capita)</i>	<i>Spin-off Social Insurance (\$000) (per capita)</i>
<b>Race/Ethnic Status</b>					
<b>Hispanic</b>	92	\$3,416,391 (\$4270)	\$740,286 (\$925)	\$444,415 (\$555)	\$366,750 (\$458)
<b>White</b>	1,993	\$74,962,391 (\$12,044)	\$16,747,361 (\$2,691)	\$10,061,508 (\$1,617)	\$8,069,906 (\$1,297)
<b>Black</b>	385	\$14,365,788 (\$7,012)	\$3,112,865 (\$1,519)	\$1,868,747 (\$912)	\$1,542,167 (\$753)
<b>Asian</b>	54	\$2,015,927 (\$9,647)	\$465,274 (\$2,227)	\$273,562 (\$1,309)	\$216,660 (\$1,037)
<b>Other</b>	41	\$1,529,288 (\$6,026)	\$331,377 (\$1,306)	\$198,934 (\$784)	\$164,170 (\$647)
<b>Lifetime Migration status</b>					
<b>NC Born&amp; Bred</b>	1,195	\$44,966,774 (\$8,071)	\$10,045,978 (\$1,803)	\$6,035,439 (\$1,083)	\$4,840,769 (\$869)
<b>Domestic Import</b>	1,192	\$44,291,331 (\$13,760)	\$10,222,380 (\$3,176)	\$6,010,343 (\$1,867)	\$4,760,174 (\$1,479)
<b>Immigrant</b>	171	\$6,437,025 (\$8,639)	\$1,438,088 (\$1,930)	\$863,977 (\$1,160)	\$692,959 (\$930)

**Source:** Authors' analysis of BEA and Census data using Implan software

\*Buying power adjusted for estimated remittances.

Indirect state and local taxes adjusted for double counting.

panics (\$2.0 billion). The majority supported Whites (\$10.2 billion or 54.1%), the NC born and bred (\$8.7 billion or 46.1%), and domestic imports (\$7.8 billion or 41.3%). However, on a per capita basis, The State spent more on immigrants (\$3,147) than any of the other lifetime migration status and race/ethnic groups. The State spent more on Hispanics (\$2,477) than on domestic imports (\$2,414), Asians (\$1,798), Whites (\$1,633), and the NC born and bred (\$1,559).

In 2010, 59 percent of The State's expenditures for essential services supported K-12 education (\$11.1 billion). Sixteen percent of this expenditure supported children living in immigrant households (\$1.7 billion) and 12.6% was used to provide education services to Hispanic children (\$1.4 billion). The majority was spent on children living in households headed by Whites (\$5.9 billion or 53.2%), domestic imports (\$5.0 billion or 45.2%), the NC born and bred (\$4.4 billion or 39.2%), and Blacks (\$2.9 billion, 26.2%), as shown in Table 15.

On a per capita basis, more was expended on educational services for children living in "other" race households (\$2,330) than in households of all of the other migrant status and race/ethnic groups. More was spent on children living in immigrant (\$2,327) and Hispanic (\$1,755) households than on children living in domestic import (\$1,565), Black (\$1,439), Asian (\$1,302), White (\$951), and NC born and bred (\$784) households (Table 15).

The State spent \$2.2 billion on health services in 2010. Only 10 percent of this total was spent on immigrants (\$238 million). And a slightly smaller share was spent on Hispanics (8.0% or \$177 million). The majority of health services expenditures was spent on Whites (54.4% or \$1.2 billion), the NC born and bred (46.1% or \$1.0 billion), domestic imports (43.1% or \$957 million), and Blacks (33.4% or \$742 million). Moreover, on a per capita basis, The State spent less on immigrants (\$319) and Hispanics (\$221) than it did on Blacks (\$362). It spent more on immigrants (\$319) than it did on domestic imports (\$297), other races (\$278), Hispanics (\$221), Asians (\$100), Whites (\$194), and the NC born and bred (\$184). The State spent more on Hispanics (\$221) than it did on Asians (\$100), Whites (\$194), and the NC born and bred (\$184) (Table 15).

As Table 14 shows, The State spent \$5.4 billion on public safety in 2010. Relatively small shares of this total were spent on immigrants (6.9% or \$373 million) and Hispanics (7.4% or \$400 million). The bulk was spent on the NC born and bred (60.5% or \$3.3 billion) and Whites (55.8% or \$3.0 billion). About a third was spent on Blacks (32.9% or \$1.8 billion) and domestic

imports (32.6% or \$1.8 billion), respectively.

Per capita expenditures were the same for immigrants (\$500) and Hispanics (\$500). Reflective of the racially disparate impact of the "get tough" on crime policies of the past two decades, per capita expenditures were highest for Blacks (\$873). They were lowest for Asians (\$396). Per capita public safety expenditures for Whites (\$488), other races (\$533), the NC born and bred (\$591), and domestic imports (\$551) fell in between these two extremes (Table 15).

We supplemented the cost analysis with a summary of participation in government transfer programs by race/ethnicity and lifetime migration status. The results are presented in Table 16.

Owing partly to differences in age distribution, immigrants, Hispanics, Asians, and other races were much less likely than their White, Black, NC born and bred, and domestic import counterparts to rely on Social Security income in 2010. The same was true for Supplemental Security Income, Public Assistance Income, and Food Stamps/SNAP receipt—notwithstanding the fact that immigrants and Hispanics in particular, as noted previously, often worked in jobs that did not pay above poverty level wages (i.e., they were the "working poor").

On the contributions side of the fiscal balance equation, we considered two categories of taxes: direct—income, property, sales and usage or consumption; and indirect—those accruing to state and local governments as a result of the presence of the various race/ethnic and lifetime migration status groups in the 2010 population.<sup>16</sup> A summary of the direct, indirect, and total tax contributions disaggregated by race/ethnicity and lifetime migration status appear in Table 17.<sup>17</sup>

Immigrants (\$2.4 billion) and Hispanics (\$1.3 billion) contributed more in direct taxes than Asians (\$708 million) and other races (\$571 million) but less than Whites (\$26 billion), the North Carolina born and bred (\$15.8 billion), domestic imports (\$15.5 billion), and Blacks (\$5 billion).

Among all of the race/ethnic and lifetime migration status groups, Hispanics (\$1,589) paid the smallest amount in direct taxes on a per capita basis in 2010. Immigrants (\$3,211) paid more per capita than Hispanics (\$1,589), Blacks (\$2,444), other races (\$2,249) and the NC born and bred (\$2,843). Domes-

<sup>16</sup> The state and its localities also receive revenues from flow-backs of portions of federal income taxes paid by immigrants, but these are not considered in our technical analysis.

<sup>17</sup> The methodology employed to derive estimates of these two categories of taxes is discussed in detail in Appendix A.

Table 15  
TOTAL AND PER CAPITA EXPENDITURES ON ESSENTIAL SERVICES

<i>Demographic Group</i>	<i>Total Expenditures (\$000) (Per capita)</i>	<i>Public Education Expenditures (\$000) (Per capita)</i>	<i>Health Services Expenditures (\$000) (Per capita)</i>	<i>Public Safety Expenditures (\$000) (Per capita)</i>
<b>All</b>	\$18,800,408 (\$1,972)	\$11,138,455 (\$1,168)	\$2,218,803 (\$233)	\$5,443,150 (\$571)
<b>Race/Ethnic Status</b>				
<b>Hispanic</b>	\$1,982,098 (\$2,477)	\$1,404,572 (\$1,755)	\$177,188 (\$221)	\$400,338 (\$500)
<b>White</b>	\$10,165,861 (\$1,633)	\$5,921,616 (\$951)	\$1,208,589 (\$194)	\$3,035,656 (\$488)
<b>Black</b>	\$5,479,524 (\$2,675)	\$2,948,886 (\$1,439)	\$741,584 (\$362)	\$1,789,054 (\$873)
<b>Asian</b>	\$375,770 (\$1,798)	\$272,079 (\$1,302)	\$20,881 (\$100)	\$82,810 (\$396)
<b>Other</b>	\$797,155 (\$3,141)	\$591,302 (\$2,330)	\$70,561 (\$278)	\$135,292 (\$533)
<b>Lifetime Migration status</b>				
<b>NC Born &amp; Bred</b>	\$8,685,983 (\$1,559)	\$4,366,950 (\$784)	\$1,023,802 (\$184)	\$3,295,231 (\$591)
<b>Domestic Import</b>	\$7,769,537 (\$2,414)	\$5,037,477 (\$1,565)	\$957,065 (\$297)	\$1,774,995 (\$551)
<b>Immigrant</b>	\$2,344,886 (\$3,147)	\$1,734,026 (\$2,327)	\$237,936 (\$319)	\$372,924 (\$500)

**Source:** Authors' analysis of BEA and Census data using Implan software.

Table 16

TOTAL AND PER CAPITA INCOME FROM PARTICIPATION IN GOVERNMENT TRANSFER PROGRAMS

<i>Demographic Group</i>	<i>Social Security Income (\$000) (per capita)</i>	<i>Supplementary Security Income (\$000) (per capita)</i>	<i>Public Assistance Income (\$000) (per capita)</i>	<i>Food Stamps/SNAP Income (\$000) (per capita)</i>
<b>All</b>	\$1,520,827 (\$160)	\$162,615 (\$17)	\$75,752 (\$8)	\$335,133 (\$37)
<b>Race/Ethnic Status</b>				
<b>Hispanic</b>	\$17,769 (\$22)	\$2,863 (\$4)	\$3,981 (\$5)	\$24,937 (\$31)
<b>White</b>	\$1,192,598 (\$192)	\$85,179 (\$14)	\$36,909 (\$6)	\$146,612 (\$24)
<b>Black</b>	\$276,889 (\$135)	\$169,702 (\$33)	\$31,689 (\$15)	\$67,704 (\$83)
<b>Asian</b>	\$9,860 (\$47)	\$1,623 (\$8)	\$987 (\$5)	\$2,863 (\$14)
<b>Other</b>	\$23,701 (\$93)	\$5,246 (\$21)	\$2,186 (\$9)	\$11,020 (\$43)
<b>Lifetime Migration Status</b>				
<b>NC Born &amp; Bred</b>	\$883,577 (\$159)	\$106,883 (\$19)	\$43,952 (\$8)	\$212,179 (\$38)
<b>Domestic Import</b>	\$582,028 (\$181)	\$50,759 (\$16)	\$26,226 (\$8)	\$114,701 (\$37)
<b>Immigrant</b>	\$55,222 (\$74)	\$4,973 (\$7)	\$5,574 (\$7)	\$28,253 (\$38)

Source: Authors' analysis of BEA and Census data using Implan software.



Table 17

## TOTAL, DIRECT, AND INDIRECT TAX CONTRIBUTIONS BY RACE/ETHNICITY AND LIFETIME MIGRATION STATUS (PER CAPITA)

<i>Demographic Group</i>	<i>Direct Contribution (\$000)</i>	<i>Indirect Contribution (\$000)</i>	<i>Total Contribution (\$000)</i>
<b>All</b>	\$33,710,615 (\$3,535)	\$13,388,942 (\$1,404)	\$33,710,615 (\$3,535)
<b>Race/Ethnic Status</b>			
<b>Hispanic</b>	\$1,271,533 (\$1,589)	\$248,418 (\$310)	\$1,519,951 (\$1,900)
<b>White</b>	\$26,154,206 (\$4,202)	\$5,754,290 (\$925)	\$31,908,496 (\$5,127)
<b>Black</b>	\$5,006,204 (\$2,444)	\$1,044,581 (\$510)	\$6,050,785 (\$2,954)
<b>Asian</b>	\$707,713 (\$3,387)	\$169,693 (\$812)	\$877,406 (\$4,199)
<b>Other</b>	\$570,959 (\$2,249)	\$71,320 (\$281)	\$642,279 (\$2,531)
<b>Lifetime Migration Status</b>			
<b>NC Born &amp; Bred</b>	\$15,841,909 (\$2,843)	\$3,415,769 (\$613)	\$19,257,677 (\$3,457)
<b>Domestic Import</b>	\$15,475,807 (\$4,808)	\$3,692,848 (\$1,147)	\$19,168,654 (\$5,955)
<b>Immigrant</b>	\$2,392,900 (\$3,211)	\$488,969 (\$656)	\$2,881,869 (\$3,869)

**Source:** Authors' analysis of BEA and Census data using Implan software.

tic imports (\$4,808), Whites (\$4,202), and Asians (\$3,387) paid more in direct taxes per capita than both immigrants (\$3,211) and Hispanics (\$1,589) (Table 17).

As Table 17 shows, immigrants (\$489 million) and Hispanics (\$248 million) were responsible for more indirect tax contributions than Asians (\$170 million) and other races (\$71 million). On a per capita basis, the indirect tax contribution of immigrants (\$656) was greater than that of Hispanics (\$310), other races (\$281), Blacks (\$510), and the NC born and bred (\$613) and less than the indirect tax contributions of Whites (\$925), Asians (\$812), and domestic imports (\$1,147).

As Table 17 shows, the total tax contribution of immigrants (\$2.9 billion) was greater in the aggregate than the total tax contributions of Hispanics (\$1.5 billion), Asians (\$877 million), and other races (\$642 million) but substantially less than the total contributions of Whites (\$32 billion), the NC born and bred (\$19 billion), and domestic imports (\$19 billion). Hispanics (\$1.5 billion) paid more in total taxes than Asian (\$877 million), and other races (\$642 million).

On a per capita basis, the total state and local tax contribution of immigrants (\$3,869) was greater than the total tax contributions of Hispanics (\$1,900), Blacks (\$2,954), other races (\$2,531), and the NC born and bred (\$3,457). Immigrants' per capita contribution was less than the per capita contributions of Whites (\$5,127), Asians (\$4,199), and domestic imports (\$5,955). Hispanic per capita total tax contribution (\$1,900) was less than the contributions of all of the other race/ethnic groups and life time migration status groups.

### ***3.4.3 Assessing Fiscal and Economic Balances***

Determining the net cost or benefit of a demographic or life time migration status group to state and local finances is a multifaceted and complex effort. It also is fraught with potential oversights and sometimes questionable assumptions. Studies conducted elsewhere of net public costs or benefits of immigrants on states have often resulted in conflicting analyses, depending on the assumptions and models used.

Given these strong caveats, we developed a series of estimates of the primary direct and indirect contributions and costs of the three lifetime migration status groups and five racial/ethnic categories to state and local budgets in 2010. We discuss the results for immigrants and Hispanics here. They appear in

Figures 21 and 22.

With regard to immigrants, we begin on the left side of Figure 21, with The State's immigrant population as tax contributors. Immigrant earnings are reduced by remittances, which leave The State's economy, and by taxes on income and property (sometimes termed personal current taxes or statutory taxes), which go directly into state and local coffers. As noted above, the direct tax contributions of immigrants equaled \$2.392 billion. Immigrant spending generates direct and indirect business revenue and employment, which generates three types of taxes: direct sales taxes, indirect business taxes, and indirect personal taxes. Altogether, as noted above, these totaled to an estimated \$2.882 billion.

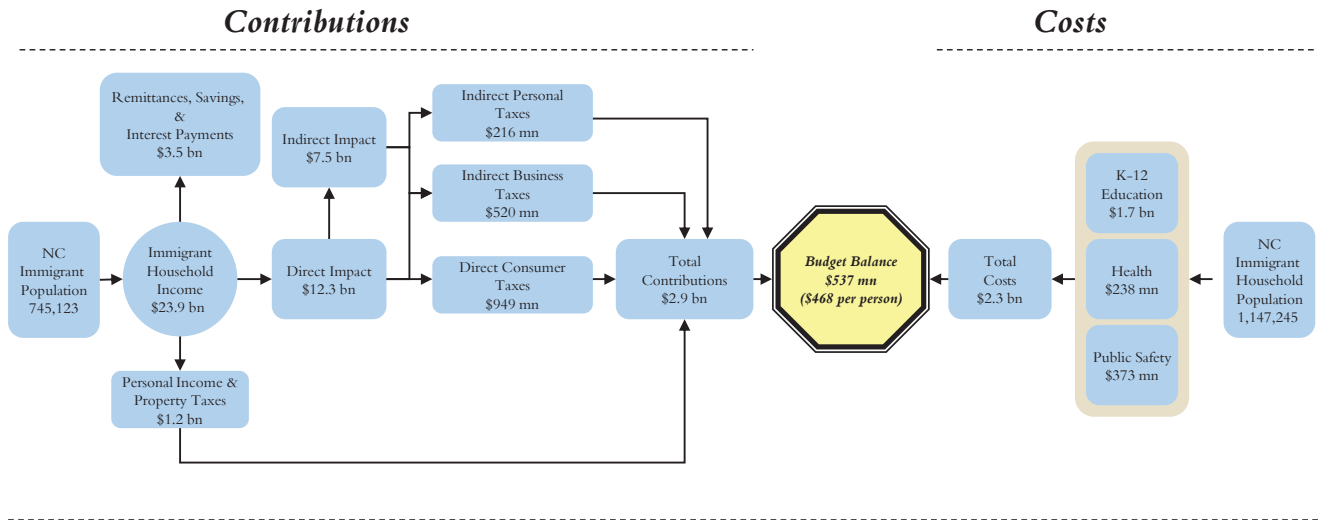
On the right side of Figure 21, we consider The State's population in immigrant population as consumers of state and local services. As noted above, North Carolina's immigrant population was responsible for an estimated \$2.345 billion in state public costs for K-12 education, health service delivery, and public safety in 2010.

The difference between immigrants' estimated major direct tax contributions (\$2.393 billion) and their estimated major public costs (\$2.345 billion) in 2010 resulted in a net fiscal surplus to The State of \$48 million, or approximately \$42 per immigrant household resident. The difference between immigrants' estimated major direct and indirect tax contributions (\$2.882 billion) and their estimated major public costs in 2010 (\$2.345 billion) resulted in a net fiscal surplus to the state of \$537 million, or approximately \$468 per immigrant household resident. We note that small differences in estimation methodology can result in a positive balance and that many of the public costs are incurred by the citizen children of recent immigrants.

As Figure 22 shows, the corresponding balances for Hispanics, many of whom live in immigrant households, are a fiscal loss of \$711 million (\$888 per Hispanic resident) counting direct tax contributions only and \$462 million (\$578 per Hispanic resident) counting direct and indirect contributions. We emphasize that these calculations incorporate the marginal costs of additional residents. These constitute approximately 44.9 percent of state and local costs with the remaining public costs not being closely tied to the number of residents. Nevertheless, these costs need to be covered.

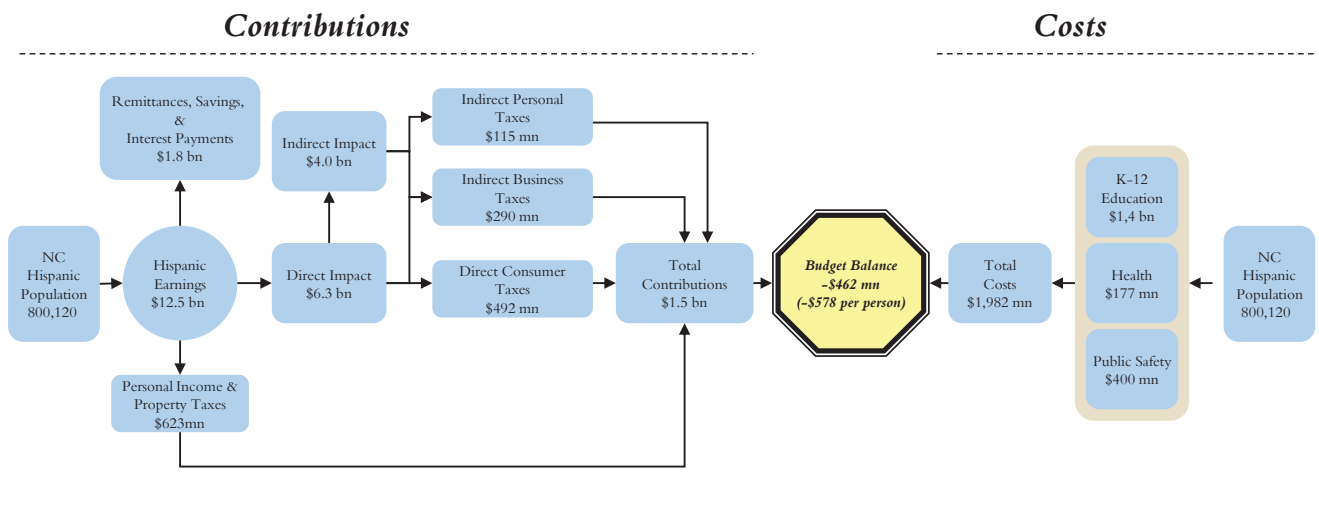
Above and beyond their fiscal impacts, immigrants and Hispanics contribute to The State's economy through their consumer expenditures. In Table 18, we combine on a per capita

Figure 21  
SUMMARY OF IMMIGRANT HOUSEHOLDS IMPACT ON THE STATE BUDGET



Source: Authors

Figure 22  
SUMMARY OF HISPANIC POPULATION IMPACT ON THE STATE BUDGET



Source: Authors

Table 18  
SUMMARY OF PER CAPITA ECONOMIC IMPACT

<i>Indicator</i>	<i>North Carolina Immigrants</i>	<i>North Carolina Hispanics</i>
<b>Consumer Expenditures &amp; Tax Contributions</b>	\$30,386	\$14,795
<b>Cost of Essential Services</b>	\$3,147	\$2,477
<b>Net Benefit</b>	\$27,239	\$12,318
<b>Benefit-Cost Ratio</b>	\$10.00-\$1.00	\$6.00-\$1.00

**Source:** Authors

basis the two groups’ consumer expenditures and tax contributions and then subtract the per capita cost of essential services as an overall indicator of economic impact. As Table 18 shows, the economic contributions of The State’s immigrant (\$27,239) and Hispanic (\$12,318) populations are net positive. Juxtaposing their net contributions against their corresponding cost of essential services reveals that \$10 in revenue was generated for every \$1 The State invested in essential services for immigrants; and \$6 for every \$1 invested in essential services for Hispanics.

#### 4.0 DISCUSSION, CONCLUSIONS, & IMPLICATIONS

Immigrants are reshaping the North Carolina demographic and economic landscape. They are far more likely to be people of color than non-Hispanic white. In comparison to the native born population, immigrants are more likely to be in their prime working ages, more likely to live in married couple households, and more likely to be employed in industries and professions that propelled economic growth over the past two decades. Immigrants have higher poverty rates than the native born, but they are more likely to be the working poor than the jobless poor. Despite higher rates of poverty, immigrants are less likely than their native born counterparts to rely on means tested sources of government assistance.

Moreover, immigrants have had a profound impact on The State’s economy through the direct and indirect effects of their consumer purchasing power. Even after discounting their buying power to account for remittances, savings, and interest payments, immigrant purchases rippled through NC’s economy, creating an overall economic impact of \$19.76 billion. On a per capita basis, immigrant consumer spending was greater than the consumer spending of one native born (the NC born and bred) and three race/ethnic groups (Blacks, other races, and Hispanics).

As the target of most of the attention in the immigration

reform debate, the economic contributions of Hispanic newcomers to The State—most of whom are immigrants—merit special attention. Hispanic buying power (\$9.5 billion) rippled through The State’s economy creating an overall economic impact of \$10.3 billion, or \$12,895 per Hispanic resident. In addition, Hispanic consumer spending was responsible for creating 92,000 spin-off jobs, which, in turn, generated \$3.4 billion in spin off labor income, \$740 million in spin-off state and local taxes, \$444 million in spin-off federal taxes, and \$367 million in spin-off social insurance payments. Consumer spending by all immigrants generated 171,000 spin-off jobs, \$6.4 billion in spin-off labor income, \$1.4 billion in spin-off state and local taxes, \$863 million in spin-off federal taxes, and \$693 million in spin-off social insurance payments.

With regard to fiscal impacts, the difference between immigrants’ estimated direct and indirect tax contributions and their estimated public cost resulted in a net fiscal surplus to The State of \$537 million—approximately \$468 per immigrant resident. The difference between Hispanics’ estimated tax contributions and their estimated public costs resulted in a net fiscal loss to The State of \$462 million or about \$578 per Hispanic resident.

Juxtaposing their net contributions against their corresponding cost of essential services reveals that \$10 in revenue was generated for every \$1 The State invested in essential services for immigrants; and \$6 for every \$1 invested in essential services for Hispanics. In other words, the overall economic impact of both groups—immigrants and Hispanics—was net positive.

Immigration to the U.S., especially from Mexico, has slowed considerably since the Great Recession (Passel, Cohen, Gonzalez-Barrera, 2012). Today, Hispanic population growth in North Carolina is driven primarily by natural population increase, that is, an excess of births over deaths, rather than immigration. And improving economic conditions in Mexico and our anti-immigrant policies may serve as deterrents to future large scale Hispanic immigration to the U.S. and North Carolina.<sup>18</sup> But our current demography, locally and nationally, dictates a critical role that immigration can and must play in the future viability and competitiveness of our state and the nation.

At the most general demographic level, we must recognize—nationally and especially here in North Carolina—that our native born populations are aging. We must further acknowledge the critical link between population aging on the

one hand and immigration reform on the other. Because our native born populations are aging, we—as a nation and as a state—simply cannot thrive and prosper in the hyper-competitive global economy of the 21st century if we do not create a path to citizenship for the 11.5 million unauthorized immigrants and open our borders to other movers from abroad in the years ahead. And if we are not globally competitive, we will not be able to build the economy that will allow us to sustain social safety net programs for seniors and other vulnerable populations.

At a more granular level, several forces are driving the aging process—the so-called greying of America and North Carolina—which further amplify the need for immigration reform. Three are highlighted here.

First, U.S. fertility rates have declined sharply, especially among native born non-Hispanic white women, over the past quarter century. The decline is related, at least in part, to the growing role of women in the paid workforce. Some women have responded to increased opportunities to work by delaying marriage and/or childbearing until they are well established in their careers. For others career goals and aspirations have overshadowed marriage and/or childbearing altogether.

Changes over a recent thirty year period in the reproductive behavior of women between the ages of 40 and 44—females who were near the end of their childbearing years—are emblematic of the impact of these societal influences on the U.S. population. The percentage of U.S. women in this 40-44 age range who were childless doubled between 1976 (10%) and 2006 (20%). And there was a precipitous drop in the percent of 40-44 year old women who had three or more children—from 59% in 1976 to 20% in 2006.

Fast forward to the present, with a median age of 42 today, roughly half of non-Hispanic white females have aged out of their childbearing years. And deferral of marriage and/or childbearing are even more common today than in the past among women who are below the median age, especially educated females, in part because there are not enough eligible, marriageable males to go around (see Rosin, 2012).

As a consequence of these demographic dynamics, the non-Hispanic white total fertility rate—a statistical measure of the number of children a couple needs to have to replace them—has been below the replacement level (1.9 vs. 2.1) for almost two decades. In part for this reason, and despite the fact that aging Boomers and Pre-boomers are living longer, “[d]eaths

<sup>18</sup> Recent research suggests, however, that illegal immigration to the U.S. may be on the rise (see Light, Lopez and Gonzalez-Barrera, 2014 and Preston, 2013).

exceeded births among non-Hispanic white Americans for the first time in at least a century...” during the year ending July 1, 2012 (Roberts, 2013).

Second, and further fueling the necessity for immigration reform and our need to embrace immigrants locally here in North Carolina, these two demographic forces—declining fertility and population aging—are threatening the future fiscal and economic viability of some U.S. communities. Between 2010 and 2012, 17% of the nation’s 366 metropolitan areas (61) and 30% of the nation’s 527 micropolitan areas (160) lost population. Here in North Carolina, 47 of The State’s 100 counties lost population between 2010 and 2012. In nearly all of these communities, deaths exceeded births and internal migration was not sufficient enough to offset natural population loss. Bereft of mainstream economic and employment opportunities, these communities are literally dying.

But ample evidence exists regarding the critical role that immigration can and will have to play in their revival. We know, for example, that an even larger number of U.S. metropolitan and micropolitan areas as well as North Carolina counties would have lost population were it not specifically for the influx of movers from abroad between 2010 and 2012. Immigrants are breathing new life into these communities, fostering both population growth and economic and employment growth through their entrepreneurial acumen. Across the nation, immigrant newcomers were critical drivers of growth in almost all of the metropolitan areas and micropolitan areas that gained population between 2010 and 2012. They were also critical drivers of population growth in some of our rural counties here in North Carolina during this period.

Third and perhaps most importantly, especially given the aging of our native born population, our elected officials must recognize that immigration is highly selective of young people. There is, for example, a 19 year differential between the median age of native born non-Hispanic whites (43) and Hispanic immigrants (24) in North Carolina. Taking this age differential into account, it is a strategic imperative for our state and the nation to move beyond our pre-occupation with fiscal impacts and focus instead on the broader and longer term economic impacts of immigration.

Even if the short-term fiscal impacts are negative, research suggest that these costs are often offset or overshadowed by the direct and indirect economic impacts of immigrant consumer spending in local communities. This was the case for North Carolina Hispanics in the current study. As previously noted,

their fiscal impact was negative (\$578 per Hispanic resident), but their broader economic impact was positive even after accounting for remittances (\$14,795 per capita).<sup>19</sup>

Demographically, we will need young immigrants in their child bearing years to fuel future population growth and to sustain social security and other government benefit programs, as well as support the tax base of local communities, especially those that are currently losing population. It is essential that we embrace immigrants as a form of enlightened self-interest given our current demographic realities.

Finally, given the critical roles that aging on the one hand and immigration on the other must play in our future, we must vociferously denounce Southern born and bred splinter groups who are sponsoring rallies in strategic locations throughout the South against what it referred to as “southern demographic displacement:” defined as the decimation of southern culture and way of life by newcomers from abroad and from states outside of the South. Such rhetoric is not only bad for business recruitment and retention; it also severely encumbers our ability to attract the diverse talent that will be needed to drive growth and prosperity in the years ahead.<sup>20</sup>

---

<sup>19</sup> Our earlier studies of the economic impact of immigrants in North Carolina and Arkansas before and during the recent recession revealed, for example, that these two states received in return for every dollar invested in K-12 education, health care, and corrections between \$6 (AR during the recession) and \$10 or \$11 (NC and AR, respectively, prior to the recession) in business revenue and taxes from their immigrant populations. See Kasarda and Johnson, 2006; Kasarda, et al., 2007; Appold, Johnson, and Kasarda, 2013.

<sup>20</sup> For a detailed discussion of the splinter groups, see Webster (2003) and Hawkes (2013).

## 5.0 REFERENCES CITED

- Appold, Stephen J., Johnson, James H., Jr., and Kasarda, John D., 2013, A Profile of Immigrant Impacts in Arkansas Following the Great Recession, Volume 2: Impacts on the Arkansas Economy. Little Rock, Arkansas: Winthrop Rockefeller Foundation, available at <http://www.wrfoundation.org/assets/files/pdfs/Immigrant%20Study%202012/Volume%202%20-%20Economic%20and%20Fiscal%20Benefits%20and%20Costs.pdf>.
- Council on Hemispheric Affairs, 2011, One-Way Ticket or Circular Flow: Changing Stream of Remittances to Latin America, August 4, available at <http://www.sph.sc.edu/cli/papers.htm>; <http://www.coha.org/one-way-ticket-or-circular-flow-changing-stream-of-remittances-to-latin-america/>
- De Vasconcelos, P., 2004, "Sending Money Home: Remittances to Latin America from the United States. Washington, DC: Inter-American Development Bank.
- Gryn, Thomas and Larsen, Luke J., 2010, Nativity and Citizenship in the United States: 2009, American Community Survey Briefs, ACSBR/09-16. Washington, DC: U.S. Census Bureau.
- Johnson, James H., Jr. and Parnell, Allan, 2012, North Carolina in Transition: Demographic Shift During the First Decade of the New Millennium. Chapel Hill: Frank Hawkins Kenan Institute of Private Enterprise, UNC; and Raleigh, NC: Institute of Emerging Issues, NCSU.
- Johnson, James H., Jr. and Kasarda, John D., 2011, Six Disruptive Demographic Trends: What Census 2010 Will Reveal. Chapel Hill: Frank Hawkins Kenan Institute of Private Enterprise, Kenan-Flagler Business School, University of North Carolina at Chapel Hill
- Johnson, James H., Jr., 2013, "The Demographic Case for Immigration Reform," *The Ripon Forum*, Vol. 47, Summer, pp. 17-19
- Johnson, James H., Jr. and Johnson-Webb, Karen D., Farrell, Walter C., Jr., 1999, "A Profile of Hispanic Newcomers to North Carolina," *Popular Government*, Vol. 65 (Fall), 2-12
- Johnson, James H., Jr., Farrell, Walter C., Jr. and Guinn, Chandra, 1997, "Immigration Reform and the Browning of America: Tensions, Conflicts, and Community Instability," *International Migration Review*, Vol. 31, 1029-1069.
- Johnson, James H., Jr. and Kasarda, John D., 2009, "Hispanic Newcomers to North Carolina: Demographic Characteristics and Economic Impact," Chapter 5 in *Latino Immigrants and the Transformation of the U.S. South*, edited by M. Odem and E. Lacy, University of Georgia Press, pp. 70-90.
- Johnson-Webb, Karen D., 2002, "Employer Recruitment and Hispanic Labor Migration: North Carolina Urban Areas at the End of the Millennium," *Professional Geographer*, Vol. 54, 406-421.
- Johnson-Webb, Karen D., 2003, *Recruiting Hispanic Labor: Immigrants in Non-Traditional Areas*. New York: LFB Scholarly Publishing.
- Kasarda, John D., et al., 2007, A Profile of Immigrants in Arkansas, Volume 2: Impacts on the Arkansas Economy. Little Rock, Arkansas: Winthrop Rockefeller Foundation, available at [http://www.urban.org/uploadedpdf/411441\\_Arkansas\\_Vol2.pdf](http://www.urban.org/uploadedpdf/411441_Arkansas_Vol2.pdf).
- Kasarda, John D., and Johnson, James H., Jr., 2006, *The Economic Impact of the Hispanic Population on the State of North Carolina*. Chapel Hill: Frank Hawkins Kenan Institute of Private Enterprise, Kenan-Flagler Business School, University of North Carolina at Chapel Hill, Available at [http://www.kenan-flagler.unc.edu/~/media/Files/kenaninstitute/UNC\\_KenanInstitute\\_HispanicReport.pdf](http://www.kenan-flagler.unc.edu/~/media/Files/kenaninstitute/UNC_KenanInstitute_HispanicReport.pdf)
- Larsen, Luke J., 2004. *The Foreign-Born Population in the United States: 2003*. Current Population Reports, P20-551, Washington, DC: U.S. Census Bureau.
- Roberts, Sam, 2013, "Census Benchmark for White Americans: More Deaths than Births," *New York Times*, June 13, available at <http://www.nytimes.com/2013/06/13/us/census-benchmark-for-white-americans-more-deaths-than-births.html>.
- Rosin, Hanna, 2012, *The End of Men: And the Rise of Women*. New York: Riverhead Books.
- Suro, R., et.al., 2005, *Hispanics: A People in Motion*. Washington, DC: The Pew Hispanic Center.
- Woodward, Douglas P., 2005, *The Economic and Business Impact of Hispanics (Latinos)*. University of South Carolina.
- Hawkes, Keegan, 2013, "The Velvet Glove," *Intelligence Report*, SPLC, Winter, Issue 152, p. 33.
- Light, Michael, T., Lopez, Mark Hugo, and Gonzalez-Barrera, Anna, 2014, *The Rise of Federal Immigration Crimes: Unlawful Reentry Drives Growth*, Pew Research Hispanic Trends Project, March 18, available at <http://www.pewhispanic.org/2014/03/18/the-rise-of-federal-immigration-crimes/>
- Mills, Karen and Doerr, John, 2011, "Changes to Visa System Should Help Job Creation," *Deseret News*, August 7,



available at <http://www.deseretnews.com/article/700168716/Changes-to-visa-system-should-help-job-creation.html?pg=all>

Passel, Jeffrey, Cohn, D’Vera, and Gonzalez-Barrera, 2012, Net Migration from Mexico Falls to Zero—and Perhaps Less, the Pew Hispanic Center, April 23, available at [http://www.pewhispanic.org/files/2012/04/Mexican-migrants-report\\_final.pdf](http://www.pewhispanic.org/files/2012/04/Mexican-migrants-report_final.pdf)

Preston, Julia, 2013, “Number of Illegal Immigrants in U.S. may be on Rise Again, Estimates Say,” *The New York Times*, September 23, available at <http://www.nytimes.com/2013/09/24/us/immigrant-population-shows-signs-of-growth-estimates-show.html>

Vigdor, Jacob L., 2013, *Measuring Immigrant Assimilation in Post-Recession America*, Civic Report No. 76, March, Manhattan Institute for Policy Research, available at [http://www.manhattan-institute.org/html/cr\\_76.htm](http://www.manhattan-institute.org/html/cr_76.htm)

Walden, Michael, 2008, *North Carolina in the Connected Age: Challenges and Opportunities in a Globalizing Economy*. Chapel Hill: UNC Press.

Webster, Gerald R., 2003, “If First You Don’t Secede, Try, Try Again: Secession, Hate, and the League of the South,” Chapter 6 in *Spaces of Hate: Geographies of Discrimination and Intolerance in the U.S.A.* New York, Routledge.

Forstall, R.L., 1996, *Population of States and Counties of the United States: 1790 to 1990*. Washington, DC: U.S. Department of Commerce, Bureau of the Census.

## **APPENDIX A: METHODOLOGY USED TO ESTIMATE OF TAX CONTRIBUTIONS**

Taxes on income are not considered disposable income and therefore do not enter into the accounting of buying power. State payroll tax contributions of the race/ethnic and lifetime migration status groups were calculated by multiplying their shares of total personal income by the amount of state income tax paid according to the BEA Regional Economic Information System for 2010, adjusted to match the state income tax contributions reported by the Census of Government report for 2010-2011.<sup>21</sup>

Estimates of total household (residential) real estate property tax and total household non-real estate property tax were derived by adjusting the total property tax received, as reported by the Census of Governments, by the proportion of the total accounted for by residential property and by person non-real estate property, as reported by the North Carolina Department of Revenue. Household property tax payments were allocated to each population and lifetime migration group by apportioning the total according to the personal income of each demographic group. We note that all renters contribute to real estate taxes through their payments to landlords.

Corporations also pay income taxes and business facilities pay property taxes. Together, these account for 9.1 percent of total state and local tax revenues. Because businesses require the active labor of North Carolinians, these were allocated to population groups on the basis of their proportional representation in the employed workforce.

Residents also pay taxes on their consumer spending, motor vehicle usage, and an assortment of other activities. These constitute 41.9 percent of all state and local tax collections. The Census of Government reports a total of \$12.3 billion in sales and similar taxes, \$608 in motor vehicle taxes, and \$1.2 billion in other taxes. Some of these were paid by businesses and some by non-residents visiting or passing through North Carolina. We allocated all of them to residents according to group buying power.

The final tax contribution category includes all state and local taxes generated as an indirect result of consumer spending by the various race/ethnic and lifetime migration status groups considered in this study. These indirect taxes were calculated using the IMPLAN input-output model.<sup>22</sup> A detailed breakdown of direct and indirect tax contributions disaggregated by race/ethnicity and lifetime migration status is present in the Table 17 (p.27).

<sup>21</sup> We implicitly make the assumption that income is equally under-reported across demographic groups.

<sup>22</sup> There is a large gap between the sales tax reported to the Census of Governments by the state of North Carolina and that modeled by Implan, suggesting that the data used by the Implan model may not include all municipal sales and usage taxes. Including these taxes may lead to a significant increase in the estimated indirect tax payments.





*Founded in 1985, the Frank Hawkins Kenan Institute of Private Enterprise pursues leading-edge programming and research in the areas of entrepreneurship, economic development, and global competitiveness. It is part of Kenan-Flagler Business School at The University of North Carolina at Chapel Hill.*

FRANK HAWKINS KENAN INSTITUTE OF PRIVATE ENTERPRISE

CB 3440, Kenan Center • Chapel Hill, NC 27599-3440

Phone: 919/962-8201 • Fax: 919/962-8202

E-mail: [kenan\\_institute@unc.edu](mailto:kenan_institute@unc.edu) • [www.kenaninstitute.unc.edu](http://www.kenaninstitute.unc.edu)