

CHANGES IN GEORGIA'S MIGRATION PATTERNS, 1991-2011

Using tax return data over the 1991-2011 period, this brief analyzes the changes in migration patterns between Georgia and the other states in the United States. Our findings indicate that during the early 1990s, Georgia experienced significant migration into the state. This pattern continued through the early 2000s, but by the latter half of the 2000s to the current period, net migration, in general, slowed substantially. In addition, our analysis indicates that over most of the 1993-2011 period, taxpayers coming into the state had less income than taxpayers leaving the state, and taxpayers moving into the state had incomes below the non-moving residents of the state.

Introduction

The change in state population from year to year is comprised of two components, natural changes due to births and deaths and changes due to migration into and out of the state. While both components affect the total number of people in the state, they affect the age distribution of the state in different ways. Changes due to births and deaths affect the total state population by changing either end of the age distribution, i.e., the young and the old. Migration tends to influence the middle section of the age distribution, and this age cohort has a large influence on the economic health of the state.

State to state migration affects state economic conditions through two main avenues. First, in most cases individuals moving into (out of) the state increase (decrease) the available labor supply. Indeed, in times of high economic growth, in-state migration increases in response to the increased demand for labor. The second avenue

in which migration affects the state economy is through the housing market. In-migration generates increased demand for housing, which has a large multiplier effect for the economy. In addition, in-migration spurs consumption of larger household items such as furniture and appliances, which also contributes positively to the health of the economy.

Table I provides some perspective on the size of the change in population across other states in 2013-2014. The figures in Table I consist of changes due to both natural causes (births less deaths) plus the changes due to net migration. The state with the most population volatility was North Dakota, largely driven by in-migration associated with the increased activity in the oil fields. The five states with the least population volatility were New Mexico, Alaska, Connecticut, Illinois, and West Virginia. These states all had small negative growth in their populations overall because the normal positive increases in population due to natural causes were offset by migration out of the state. Georgia's population volatility ranking fell close to the top at 14. The state experienced population growth due to natural causes and population growth due to positive net migration.

Table 1. Population Volatility across the United States in 2013-2014: Georgia and the Top and Bottom Five States⁽ⁱ⁾

STATE	CHANGE IN POPULATION/ TOTAL POPULATION	RANK
North Dakota	2.16%	1
Texas	1.71%	2
Nevada	1.71%	3
Colorado	1.59%	4
Washington, D.C.	1.51%	5
Georgia	1.03%	14
New Mexico	-0.06%	47
Alaska	-0.07%	48
Connecticut	-0.07%	49
Illinois	-0.08%	50
West Virginia	-0.18%	51

Source: U.S. Census Bureau

(i) Rankings include Washington, D.C.

Table 2 provides a historical view of Georgia's population volatility. At its peak in 1998-1999, Georgia was the fourth fastest growing state in the United States, rising from 11th in 1990. Since that time, state population has continued to increase but at a slower rate than it has experienced in the past.

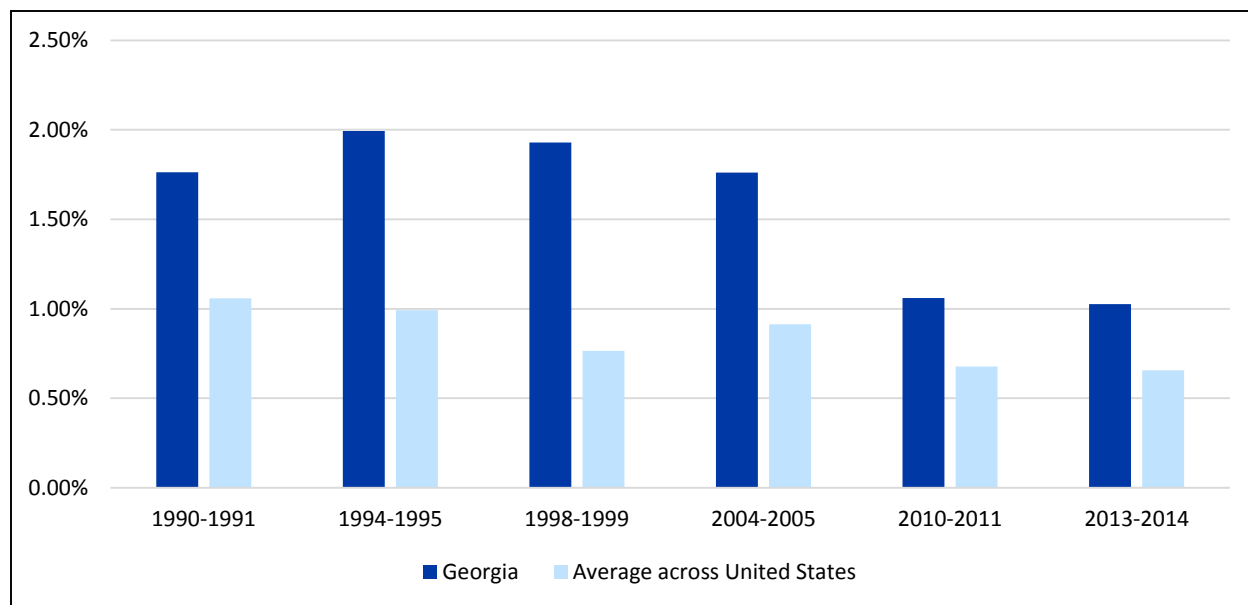
Table 2. Population Volatility in Georgia, 1990 to 2014

YEAR	POPULATION CHANGE AS A % OF TOTAL POPULATION	NATIONAL RANKING
1990-1991	1.76%	11
1994-1995	2.02%	6
1998-1999	1.99%	4
2004-2005	1.76%	6
2010-2011	1.06%	10
2013-2014	1.03%	14

Source: U.S. Census Bureau

Figure 1 illustrates the population volatility trend in Georgia compared to the average across all states. Population change as a percent of the total population in Georgia has greatly exceeded the U.S. average since the beginning of the study period. On the other hand, this ratio dropped sharply between the 2004-2005 period and the 2010-2011 period for Georgia. While still greater than the average for all other states, the ratio for Georgia is much smaller than in years past for the 2010-2011 and 2013-2014 periods.

Figure 1. Change in Total Population as a Percent of Total Population

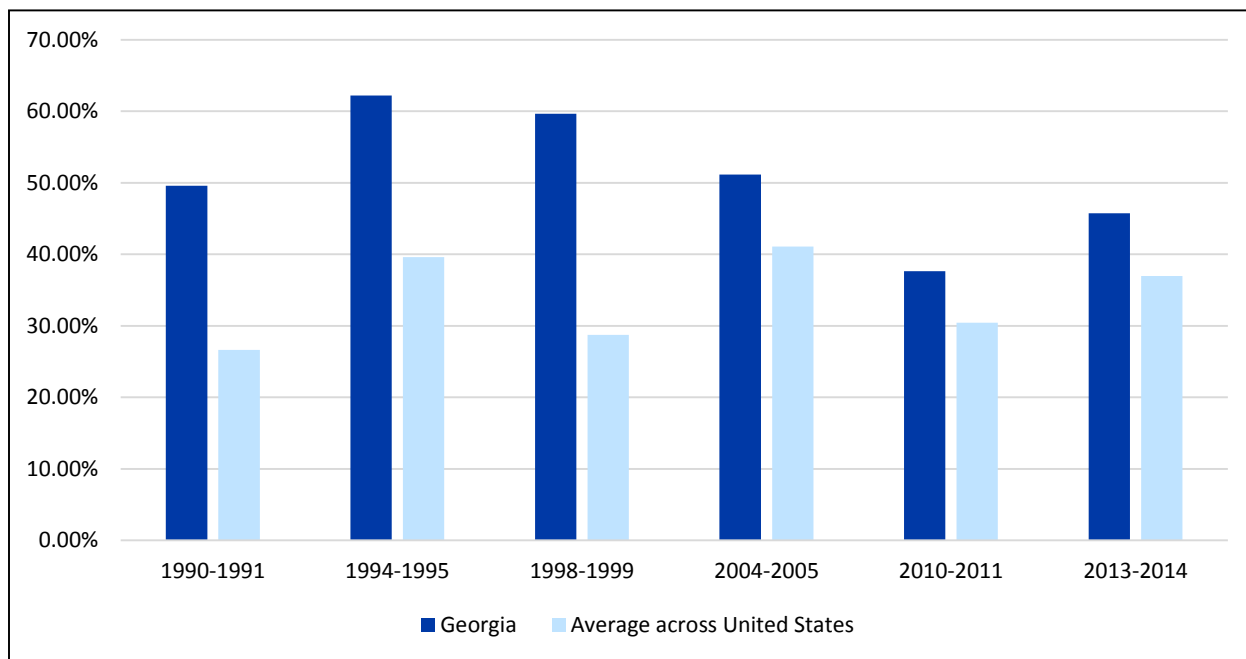


Source: U.S. Census Bureau

Figure 2 focuses on the influence of net migration as a component of the change in total population. Net migration accounted for over 60 percent of the change in population between 1994 and 1995 in Georgia. By the 2010-2011 period, net migration's share of total population volatility in Georgia fell to 38 percent but rebounded to 46 percent for the 2013-2014 period, as the housing market began to recover.

The general conclusions from this analysis are that the state has had relatively high population growth since 1990 and that net migration has been a substantial component of this growth. On the other hand, the analysis also indicates that population growth is slowing in the state, relative to other states, because net migration is a less prominent component than in past years.

Figure 2. Net Migration as a Percent of Total Change in Population



Source: U.S. Census Bureau

Data

The migration data used for the remainder of this analysis are counts of taxpayer exemptions from domestic and foreign federal income tax returns filed between 1991 and 2011 and the total aggregate gross income (AGI) associated with those returns.¹ The tax return data is provided to the U.S. Census Bureau by the Internal Revenue Service (IRS) and includes only migration relevant data, such as the taxpayer address at the county level, taxpayer income measured in terms of AGI and number of exemptions claimed on the return.

In any one year, the data contains from 95 to 98 percent of the filed tax returns across the country.² The poor and elderly may be underrepresented by the information presented in this research because they are less likely to file income tax returns, largely due to filing requirements. Therefore, particular care should be taken when reading these results because the underlying population of the data source may not be entirely representative of the U.S. migration population. On the other hand, the data represents well the taxpaying migration population.

¹ The number of exemptions from a return is equal to the number of persons associated with that tax filing unit. Therefore, we use the number of exemptions to represent the tax-filing migrant population.

² The annual file contains all returns filed by September of each year.

Tax returns are included in the analysis dataset only when they are “matched,” i.e. when the IRS received the tax return from the same filer for two consecutive tax years, or when the filer files a nonresident return. Two exceptions are returns with zero exemptions and estate tax returns for deceased filers. Zero exemption returns are not included in the final count for number of returns or exemptions, but the AGI associated with such returns is included in the total AGI value.³ Estate tax returns are not included in the analysis dataset. In addition, returns are matched using the primary taxpayer’s social security number. No match is made on the secondary social security number. Therefore, a spouse who files as part of a joint return one year but files a single return the next will not be included in the data. The primary filer will be included both years. The contrary also holds in the case of individuals filing as a single return one year and as a spouse the next year.

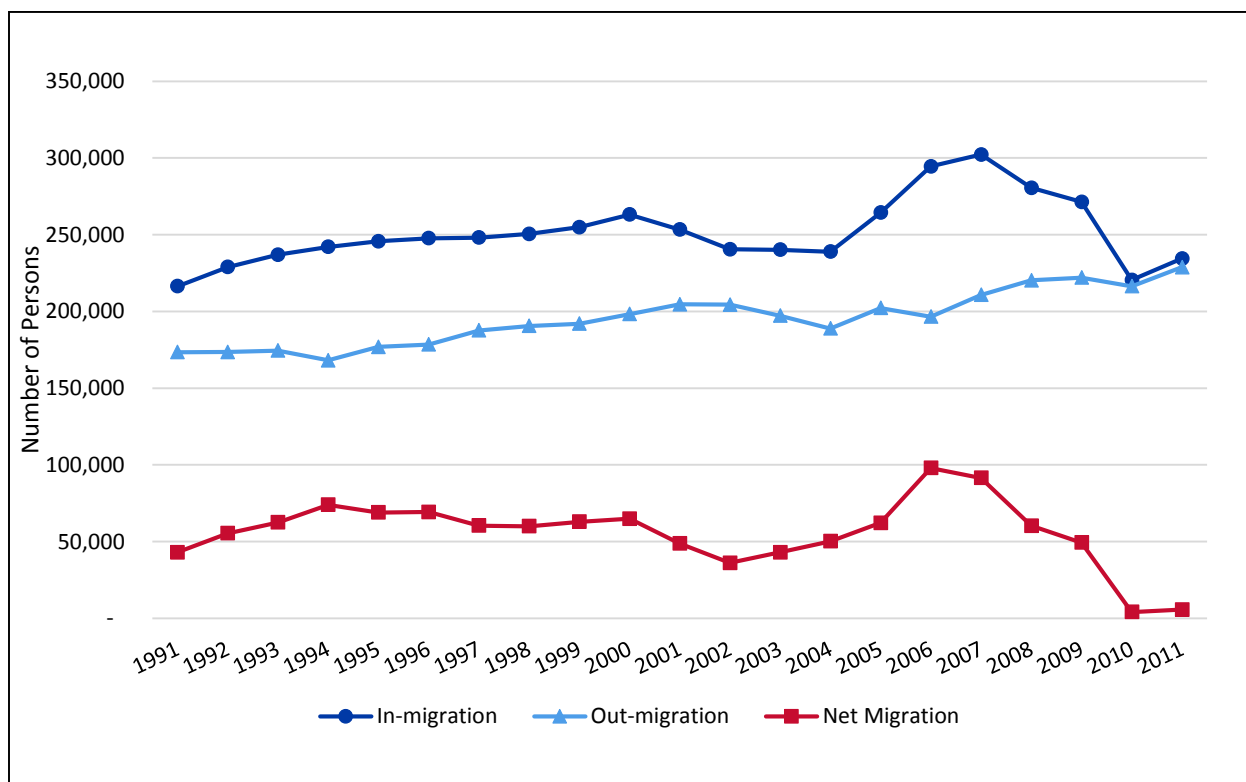
Non-migrating individuals are defined as those taxpayers with matching addresses from year to year. Matched returns with different addresses from year to year are defined as migration returns.⁴

The data represents the migration of taxpayers at the time of filing their returns for the prior year. Therefore, the AGI associated with, for example, the year 2003 is the income earned in 2002 and reported in 2003.

Net Migration: People and AGI

Figure 3 shows the trend in the number of people moving into and out of Georgia over the 1991-2011 period. In-migration was 216,000 in 1991, while out-migration was 173,000, so net migration was about 43,000 in 1991.

Figure 3. In- and Out-Migration in Georgia, 1991-2011

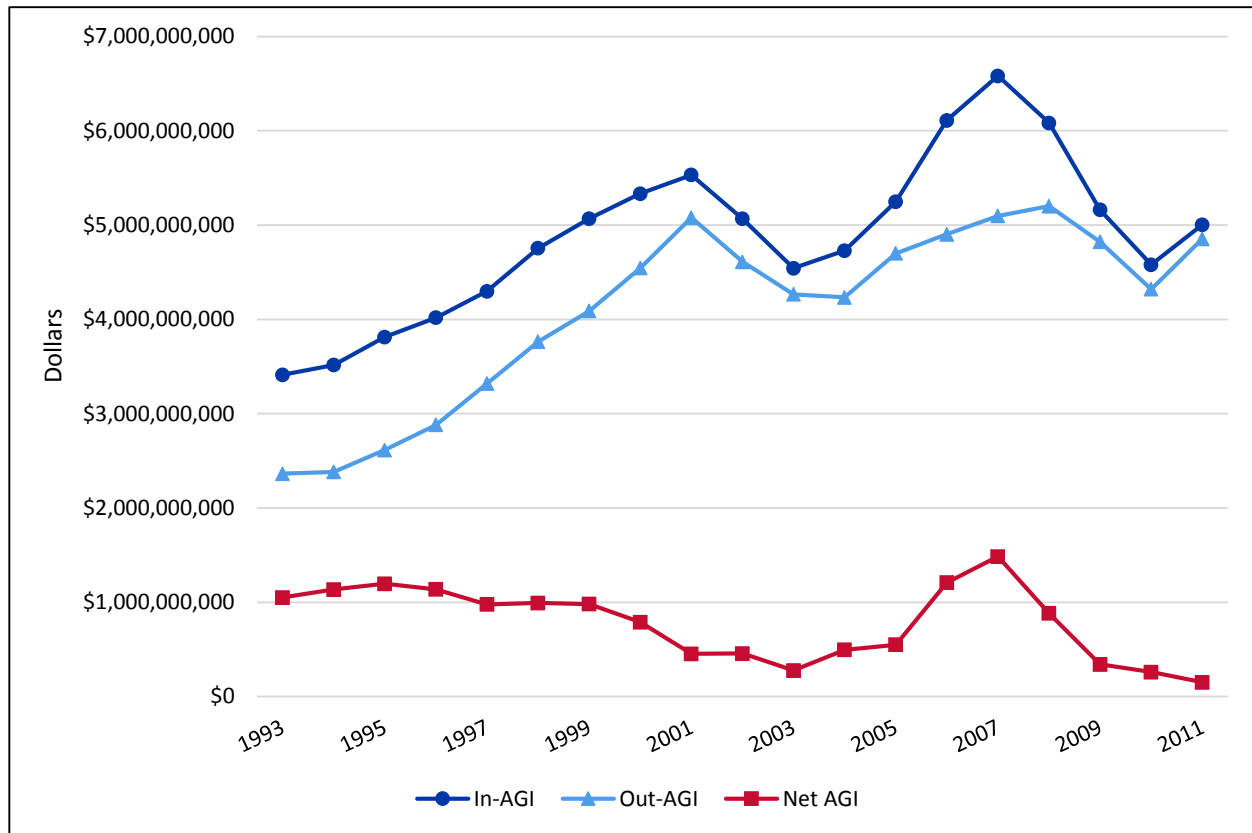


Source: IRS Statistics of Income Migration Data

³ Zero exemption returns are returns filed by taxpayers who are listed as a dependent on another tax return. These are usually child returns for which filing is required because of the amount of income they have earned.

⁴ It is assumed that the address of the return represents the state of residence. This may not always be correct in the case of returns filed by accountants or by some financial institutions, filers residing in two states, military returns, returns of college students, and in the case of some business returns.

Figure 4. In- and Out-AGI in Georgia, 1993-2011



Source: IRS Statistics of Income Migration Data

While a substantial gap between in- and out-migration continued until 2010, by 2011 in-migration exceeded out-migration by only about 5,700, down from its peak at roughly 100,000 in 1996 and 1997. The majority of this decline in net migration is due to a substantial decline in in-migration over the 2008-2010 period. This decline in in-migration mirrors the national decline in migration across all states as the housing market crashed.

Furthermore, these data reveal that out-migration grew at an average rate of 1.4 percent annually. In contrast, in-migration grew at an average annual rate of only 0.4 percent over the 1991-2011 period. Thus, although in-migration exceeded out-migration in every year during the 1991-2011 period, the average annual growth in out-migration over this time period exceeded that of in-migration.

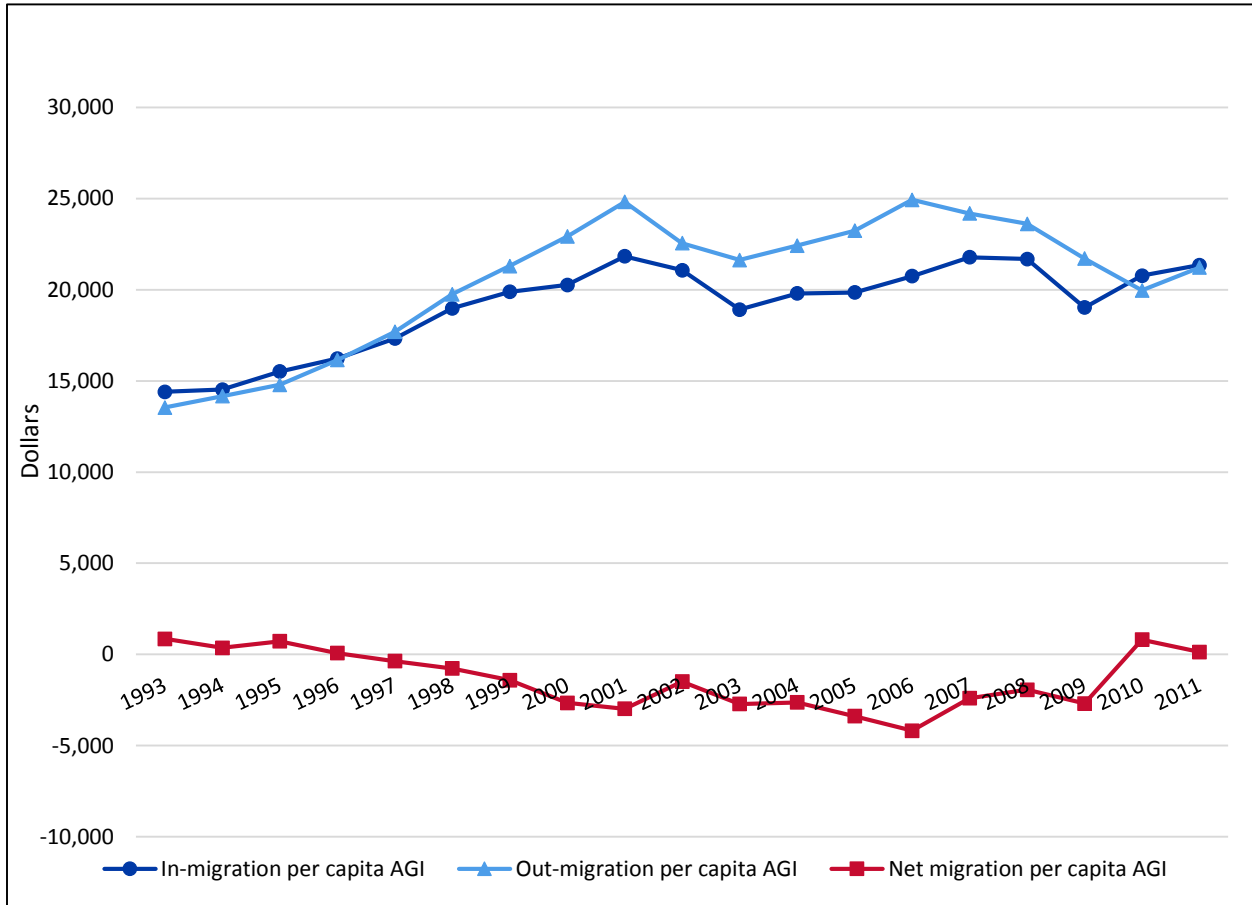
Figure 4 shows the amount of total adjusted gross income associated with individuals moving into the state compared to the amount of adjusted gross income associated with individuals moving out of the state. Net AGI shows a roughly similar pattern over time as net migration, such that net AGI is positive in every year

over the 1993-2011 period. Thus, over the 1993-2011 period, migration into the state contributes a positive amount to state AGI. On the other hand, the size of the contribution falls significantly from \$1 billion in 1993 to \$151 million in 2011.

When separated into in-AGI and out-AGI, it becomes clear that both in- and out-migration AGI grew over the 1993-2011 period, but the gap between the two narrowed significantly between 1993 and 2011. For instance, out-migration grew at an average annual rate of 4.1 percent over the 1993-2011 compared to an average annual growth rate of 2.15 percent for in-migration.

Figure 5 shows the levels of in- and out-migration per capita AGI over the 1993-2011 period. This measure represents the average income, measured in terms of AGI, per in-migration taxpayer and the average income per out-migration taxpayer and gives an indication of how much the state is gaining or losing per person as people move into and out of the state. For instance, in 1993 in-migration per capita AGI was \$14,404 and out-migration per capita AGI was \$13,547, yielding a net migration per capita AGI for 1993 of approximately

Figure 5. In- and Out-Migration Per Capita AGI in Georgia, 1993-2011



Source: IRS Statistics of Income Migration Data

\$860. Unlike the aggregate graphs above, the difference between in-migration and out-migration per capita AGI is fairly small throughout the study period and is negative from 1997 through 2009.

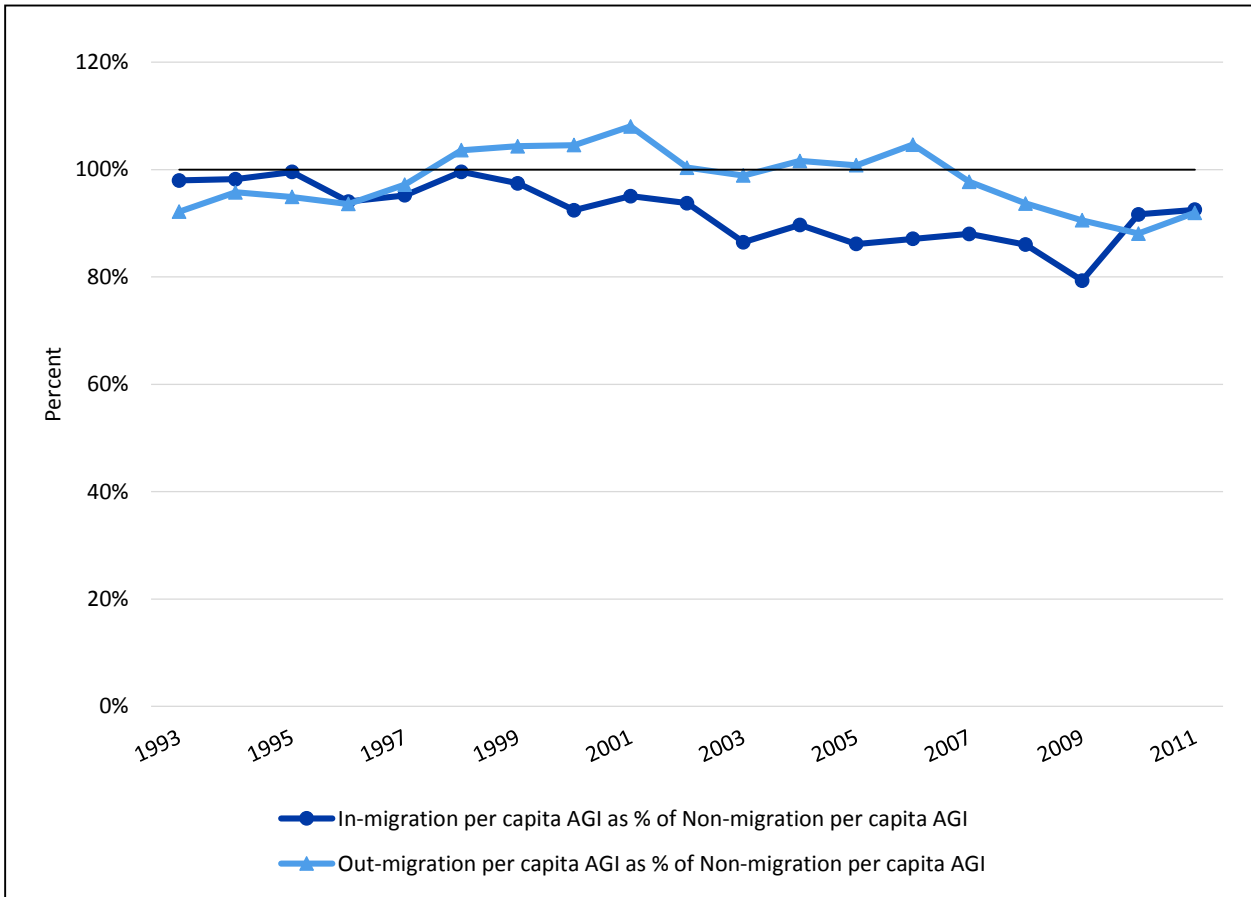
The negative values for net migration per capita AGI indicate that on average the AGI of in-migration taxpayers was less than the AGI of out-migration taxpayers. This is a complex result but consistent with the information shown in figures 3 and 4. While in-migration and in-migration AGI exceeded out-migration and out-migration AGI on an aggregate basis over the 1993-2011 period, because the ratio of in-migration AGI to in-migration population was less than the ratio of out-migration AGI to out-migration population, net migration per capita AGI was negative. That is, on a per person basis Georgia lost state income due to migration over the 1997-2009 period. For the years 2010 and 2011, net migration per capita AGI was slightly positive.

Figure 6 shows the impact of in- and out-migration per capita AGI relative to per capita AGI for the non-

migration population (i.e., those taxpayers who did not move out of the state). The per capita income of the non-migration population is denoted by the black horizontal line at 100 percent. During the 1993-1995 period, in-migration per capita AGI nearly equaled per capita AGI of the non-migration population. That is, individuals moving into the state had incomes relatively on par with the existing population. Also, during this time period and through 1997, out-migration per capita AGI as a percent of non-migration per capita AGI remained below the 100 percent line, indicating that individuals leaving the state had lower per capita incomes than those remaining in the state. Both of these factors worked to bolster total state per capita income over this period.

By 1997, the picture reverses and in-migration per capita AGI begins to fall considerably below 100 percent of non-migration AGI, indicating that on average the individuals moving into the state had incomes less than the existing population. In general, this trend continues and strengthens through 2011.

Figure 6: In- and Out-Migration Per Capita AGI as a Percent of Non-Migration Per Capita AGI



Source: IRS Statistics of Income Migration Data

Overall, out-migration per capita AGI exceeds non-migration per capita AGI from 1998-2006. This trend in out-migration per capita AGI coupled with the trend in in-migration per capita AGI worked to reduce state per capita income levels over this time period.

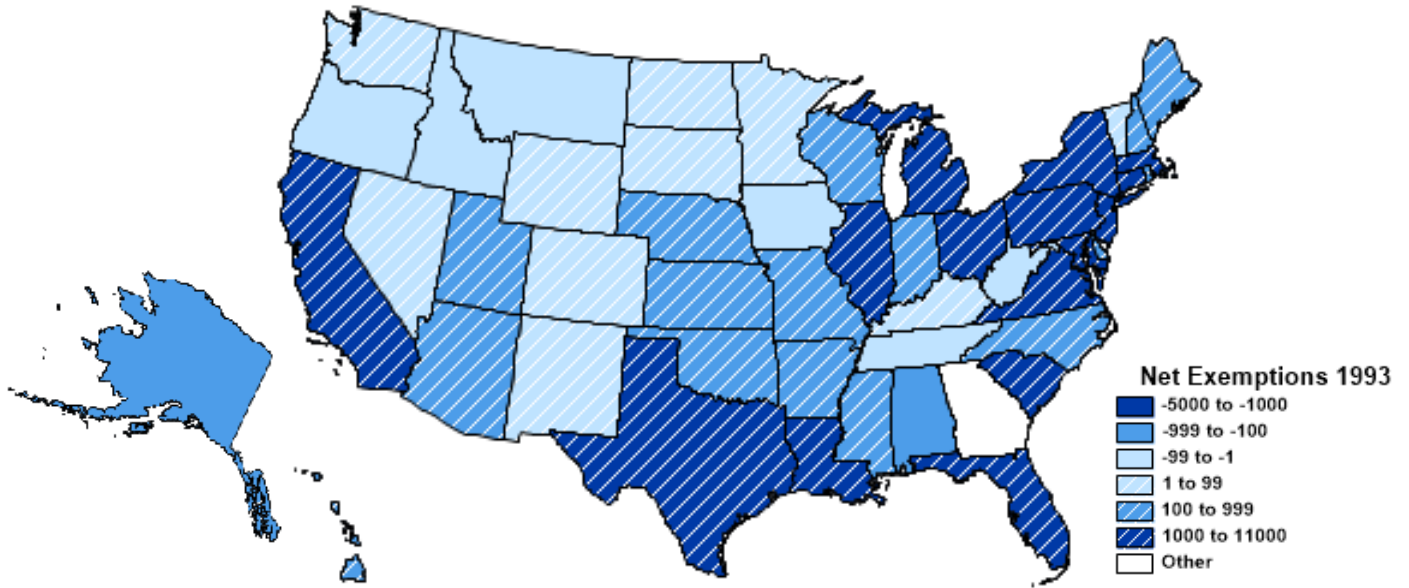
By 2007, out-migration per capita AGI falls below the 100 percent line indicating that individuals moving out of the state had lower per capita AGI than the remaining population. By 2010, in-migration per capita AGI was greater than out-migration per capita AGI, indicating that those individuals moving into the state had higher incomes on average than those moving out of the state. On the other hand, in-migration per capita AGI was significantly below that of the non-migration population.

Trends with Other States

Maps 1 through 3 show the patterns of net migration between Georgia and the rest of the country. While Georgia is, in the aggregate, a net importer of persons from all other states over the entire period of the study, understanding these dynamics at the state level may yield insights that are not obvious in aggregate. That is, though Georgia may be a net importer of persons from the rest of the country, this may not be an accurate description of Georgia's individual relationship with every state.

Underscoring this possibility, Map 1 shows net migration between Georgia and the other states across the country in 1993. Georgia was, in fact, a net importer of taxpayers from 42 states and the District of Columbia, and an exporter of persons to 8 states. Among its neighboring states, Georgia was a net exporter of persons to Alabama (-843) and Tennessee (-31) but a net importer of persons from Florida (10,554), South Carolina (1,956), and North Carolina (680).

Map 1. Net Migration between Georgia and Other States in 1993

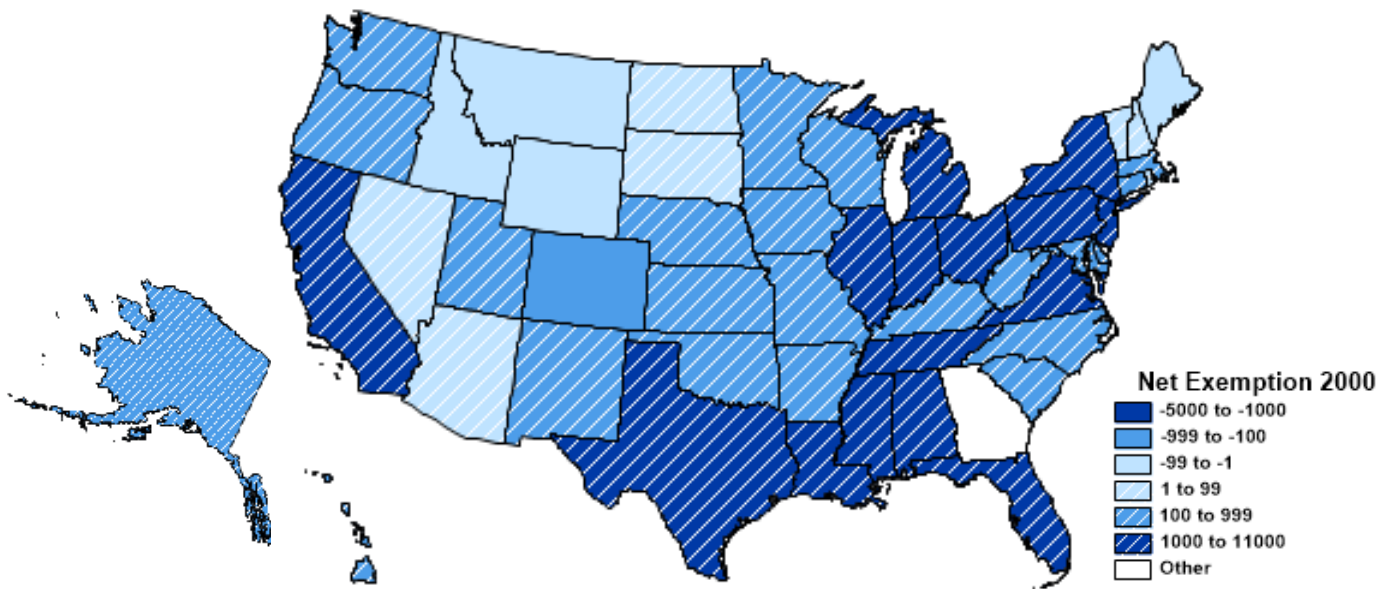


Source: IRS Statistics of Income Migration Data

Maps 2 and 3 show the pattern of net migration for years 2000 and 2011. In 2000, Georgia was a net exporter of persons to six states, although none of those states were neighboring states. There was a sharp reversal of this trend in 2011, however, as Georgia was a net exporter of persons to 22 states

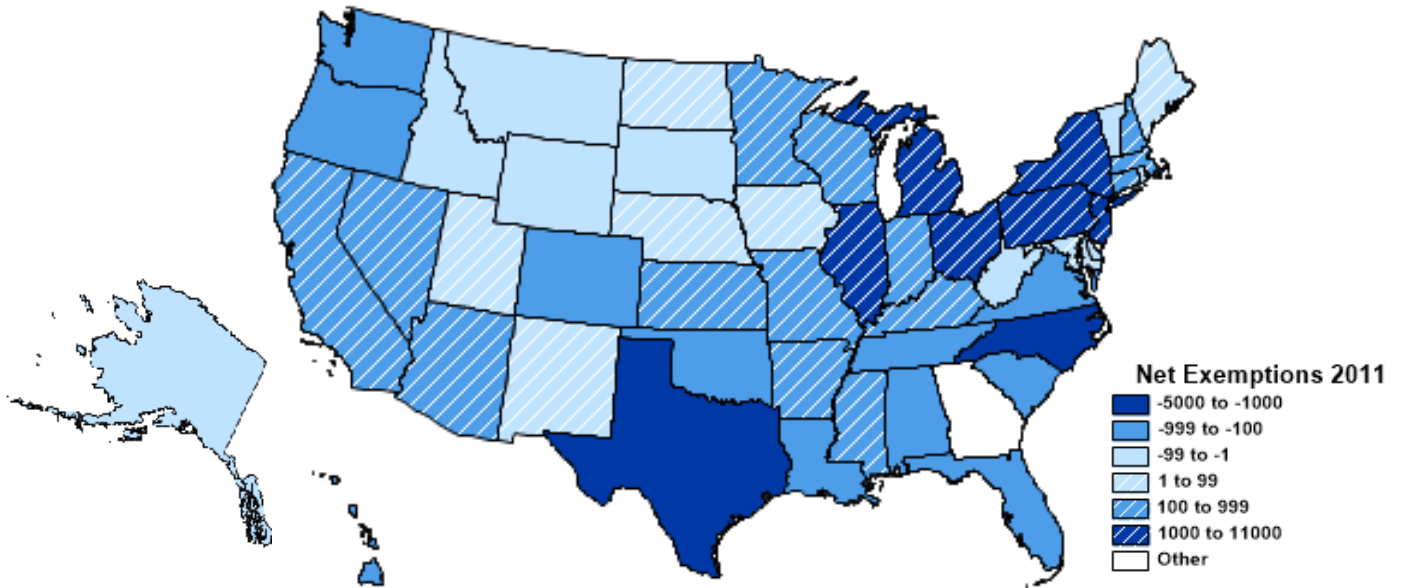
and the District of Columbia. Importantly, Georgia was also a net exporter of persons to all neighboring states including Alabama (-950), Florida (-387), North Carolina (-1,097), South Carolina (-346), and Tennessee (-579).

Map 2. Net Migration between Georgia and Other States in 2000



Source: IRS Statistics of Income Migration Data

Map 3. Net Migration between Georgia and Other States in 2011



Source: IRS Statistics of Income Migration Data

Maps 4 through 6 show net migration per capita AGI between Georgia and the rest of the country. That is, the difference between the average incomes of residents moving to Georgia from another state and average incomes of those moving away from Georgia to that same state during years 1993, 2000, and 2011.⁵ Map 4 shows that in 1993 Georgia lost income to 18 states on a per capita basis. Among these were the neighboring states of Florida (\$1,555), North Carolina (\$857), and South Carolina (\$878). The map also shows that despite a net loss of people to Alabama and Tennessee during the same year (see Map 1 above), residents migrating from Georgia to those states had less income on average than those migrating from those states to Georgia.

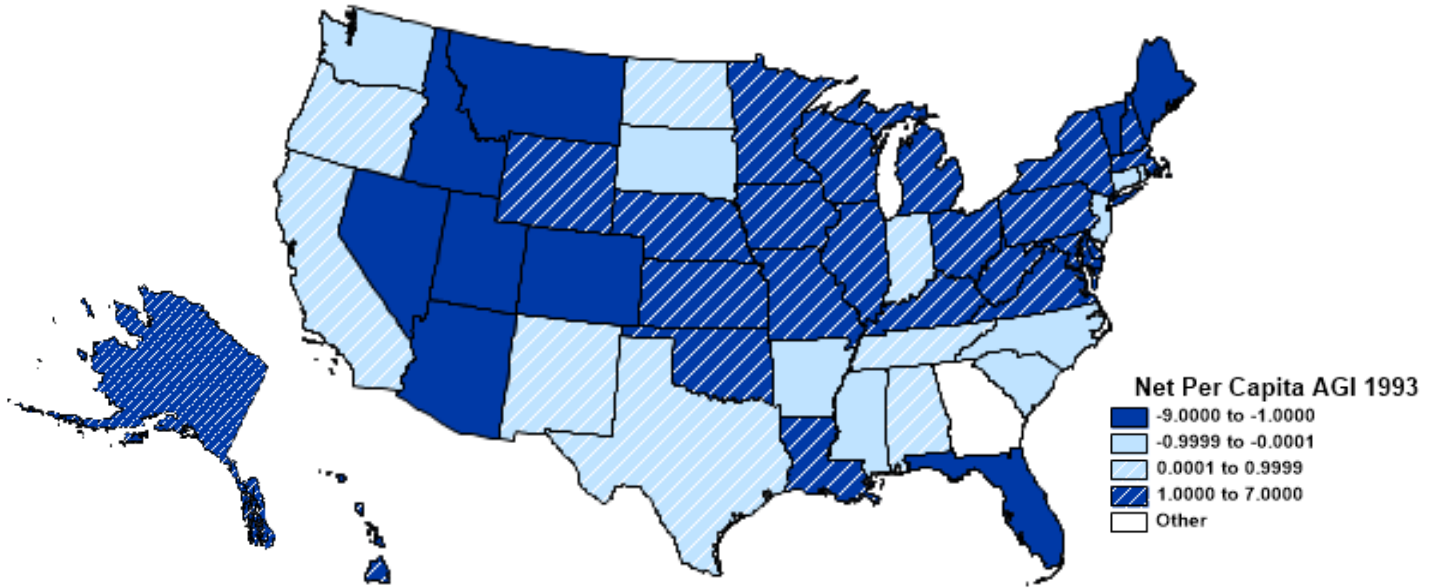
Map 5 shows the same measure for the year 2000. In this year Georgia lost income on a per capita basis to

25 states and the District of Columbia. This is particularly interesting given that in the same year Georgia was a net importer of persons from all but six states, suggesting that at this time Georgia was attracting residents from many states but that these individuals had lower incomes on average than the Georgia individuals moving to those states. Also of note, the group of states included the neighboring states of Alabama (\$5), Florida (\$5,652), North Carolina (\$3,433), and Tennessee (\$1,403).

Map 6 shows a slightly improved trend for 2011, in that Georgia lost income on a per capita basis to only 19 states. Note as well that while Georgia was a net exporter of persons to all neighboring states in 2011 (see Map 3), on average Georgia lost residents with higher incomes than those it gained from all neighboring states with the exception of Alabama.

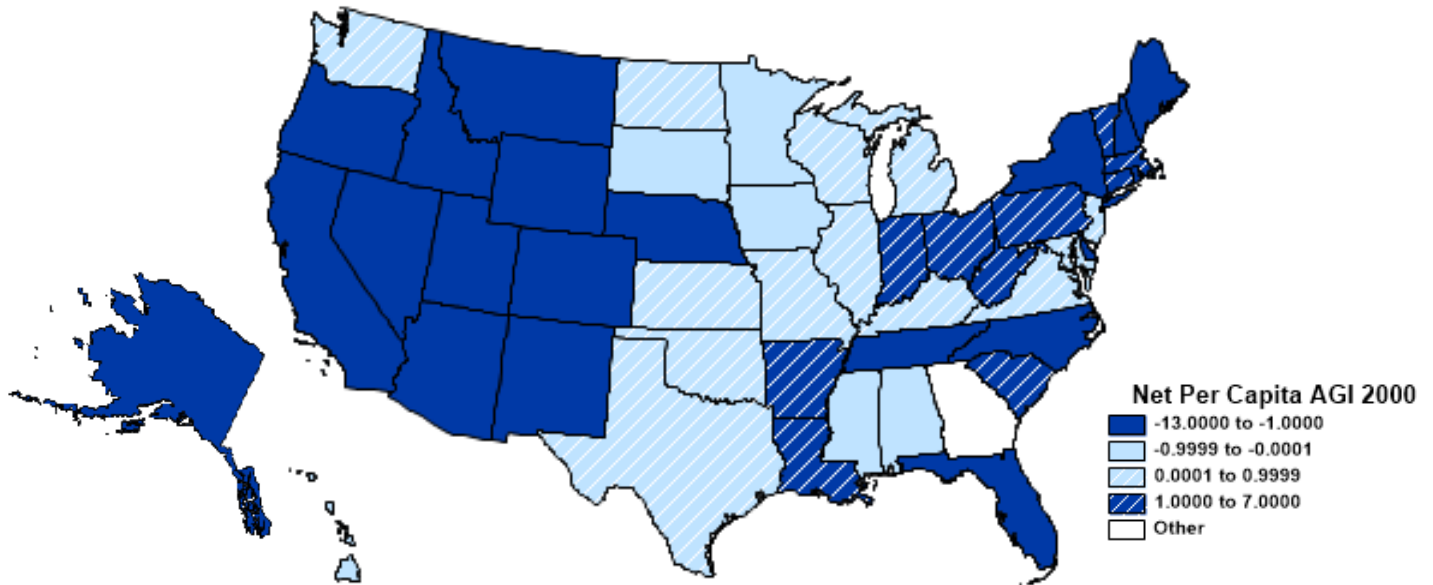
⁵ For example, the South Carolina calculation is computed as follows: (AGI of in-migration taxpayers from SC/Total in-migration taxpayers from SC) – (AGI of out-migration taxpayers to SC/Total out-migration taxpayers to SC). Positive values of this measure indicate that average incomes of individuals moving to Georgia from South Carolina exceed the average incomes of those moving to South Carolina from Georgia.

Map 4. Net Per Capita AGI between Georgia and Other States in 1993



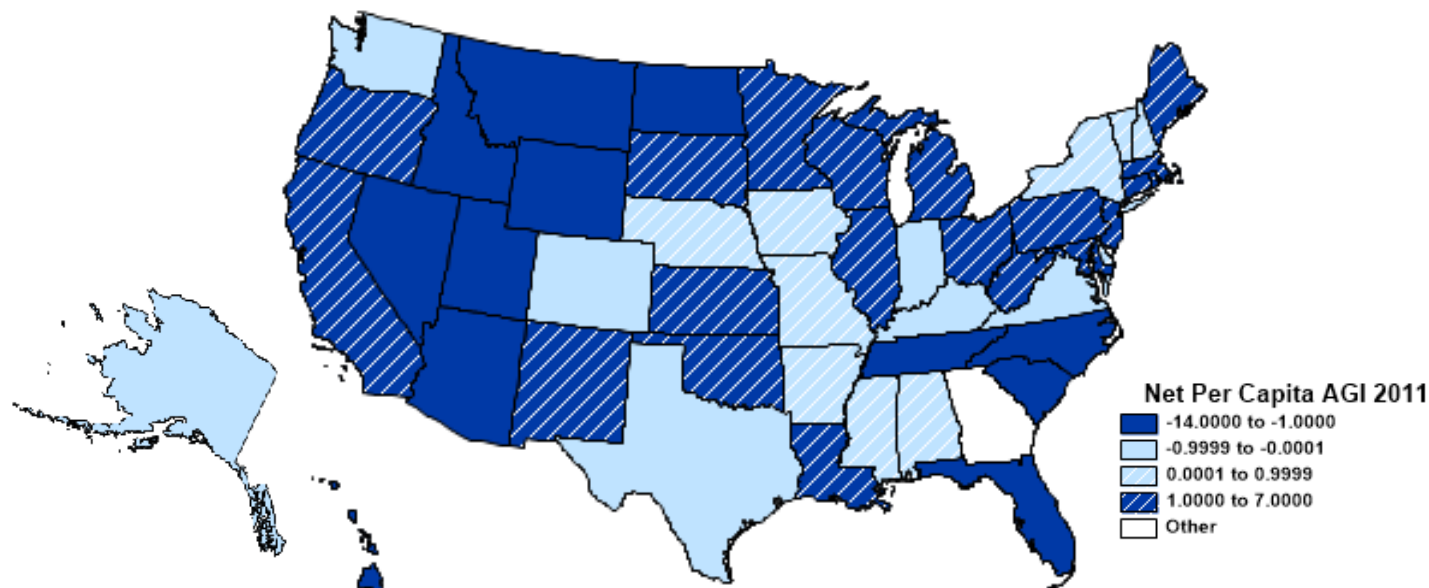
Source: IRS Statistics of Income Migration Data

Map 5. Net Per Capita AGI between Georgia and Other States in 2000



Source: IRS Statistics of Income Migration Data

Map 6. Net Per Capita AGI between Georgia and Other States in 2011



Source: IRS Statistics of Income Migration Data

Conclusion

Georgia's net migration remained positive for each of the years from 1993-2011. That is, more people moved into Georgia than moved away from the state during each year of the study period. Generally, this finding may indicate that Georgia has been an attractive destination for relocation over the last two decades. On the other hand, a more detailed analysis indicates that net migration per capita AGI was negative for a large period of this time, indicating that individuals moving into the state had lower incomes compared to those moving out of the state. Furthermore, for the period between 1998 and 2009, we find that individuals moving out of the state had higher incomes than individuals moving into the state, and that generally over the 1993-2011 period the in-migration population had lower incomes compared to Georgia residents who did not move.

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