SOUTH CAROLINA KEY PERFORMANCE INDICATORS 2009

Economic, Community, and Innovation Measures
Labor Market Information, Division of Research

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Contributors:

Angel Earle
Rebecca Gunnlaugsson
Erica Morgan
Joe Ward

South Carolina Department of Commerce
1201 Main Street, Suite 1600
Columbia, SC 29201
www.sccommerce.com

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Introduction

An important step in the economic development of South Carolina is having the ability to accurately and efficiently measure progress towards objective goals. The Key Performance Indicators (KPIs) introduced in this report are quantitative measures of South Carolina's performance in a variety of areas. They provide a roadmap for the state, showing where it has been, where it is currently, and what critical areas require attention if it is to arrive at its desired destination.

This report is intended to identify factors that are most closely associated with long-term economic success and to summarize South Carolina's progress in those areas both over time and in comparison to the national average performance. It also highlights relationships between factors that may not be readily apparent. This report allows policymakers to identify areas of strength and weakness within the state and can help shape economic development initiatives. Three areas of particular interest addressed in this report include the economy, innovation, and the community. While measures of economic activity may provide a summary of the state's performance today, advances in the areas of innovation and community are engines for future economic growth and social development.

While South Carolina consistently finds itself in the bottom of national rankings in well-known indicators such as per capita income and high school graduation rates, these single measures fail to provide a complete picture of the economic health of the state. This report provides a more comprehensive overview of the state's performance in a number of important indicators and highlights how factors that may not receive as much attention, such as foreign direct investment per capita, research and development, etc. also contribute to long-term economic growth potential. It is important to keep in mind that the data in this report provide only numerical indicators of performance. Important dimensions for economic growth may be overlooked if qualitative indicators are unavailable.

This report provides several measures which capture South Carolina's performance in key areas both over time and in comparison to the national average performance. An overall composite score was generated from nine key variables chosen based on regression analysis and a review of the economic development literature. The composite score for South Carolina can be compared over time or to the nation to track relative performance. The value of the composite index, while useful for identifying trends, does not have context as a standalone number. The absolute value of the index is dependent on the choice of the base year of comparison.

In addition to tracking the composite index and general trends in the three sub-areas, this report also provides detailed statistics on indicators associated with regional economic growth in the new, knowledge-based economy. It identifies areas in which South Carolina can capitalize on its strong position as well as areas of opportunity for development. While the indices are useful tools for identifying trends in the data, it is the supporting data that must be used to isolate why the trends move as they do and what should be done to make improvements in the area of interest.

An important aspect of the Key Performance Indicators is the ability to revisit these measures at a future date to track the performance of the state. For that reason, only metrics produced by well-established, reliable sources were used in the report. This will ensure ease of collection as well as the ability to compare the indicators over time with confidence that major revisions to the data are not impacting the results.

Methodology Notes: South Carolina Key Performance Indicators

To summarize progress South Carolina has made both over time and in comparison to the national average, Key Performance Indicators (KPI) were constructed. This section outlines the specific methodology employed in the development of the three key performance indicators: Economic performance (E), Innovation (I), and Community (C).

Introduction

Each KPI measures the average achievements in South Carolina in three dimensions of economic development: Economic performance (E), Innovation (I), and Community (C). Each is developed by combining indicators from these three respective areas into a composite index. This single statistic can serve as a frame of reference for development in South Carolina over time as well as a way to compare the performance of South Carolina with that of the nation as a whole.

Methodology

Each KPI is a measure of three variables which are, in turn, weighted averages of South Carolina's performance in a number of variables shown to be correlated with growth in per capita personal income. Performance of each indicator is compared to South Carolina's performance in the year 2000.

The specifics for the methodology are as follows:

Step 1: Divide each variable by its value in the year 2000.

Situation 1: If the variable contributes positively to economic growth, divide the current year's value of that variable by the variable's value in the year 2000 for South Carolina.

$$\frac{PCI_t}{PCI_{2000}} \qquad (1)$$

Situation 2: If the variable contributes negatively to economic growth, divide the variable's value in the year 2000 by the variable's current value. The crime rate is an example of such a component.

$$\frac{Crime_{2000}}{Crime_t} \qquad (2)$$

Step 2: Weight each component of the index based on regression analysis.

Regression analysis on data from all 50 states and the District of Columbia were used to determine which indicators in the areas of innovation and community were most significantly related to per capita income. The coefficient parameters of the regression were used to help determine the appropriate weights for each variable. If two variables were associated with per capita income but also highly correlated with one another, only one variable was chosen for inclusion in the index. Full regression results are provided in Appendix A.

Step 2.1 – Economy Index: Equal weights were applied in the Economy Index for the variables of per capita personal income, real state gross domestic product (GDP) per capita, and the employment rate.

Step 2.2 – Innovation Index: The Innovation Index is composed of the percent of the population aged 25 or greater that have completed a Bachelor's degree or more, the value of foreign direct investment (FDI) per capita, and the value of research and development (R&D) as a percentage of GDP. Weights of 26% on education, 14% on FDI, and 60% on R&D were applied.

Step 2.3 – Community Index: The Community Index is composed of the percent of the population not in poverty, the crime rate, and the percent of the population between the ages of 25 and 64. The crime rate is inverted to indicate that an increase in the crime rate is a "bad." The weights for this index were 16% for the (non)poverty rate, 21% for crime, and 63% for working age population.

An example for the community index is shown below.

$$C_t = \left(\sigma_1 \frac{Pov_t}{Pov_{2000}}\right) + \left(\sigma_2 \frac{Crime_{2000}}{Crime_t}\right) + \left(\sigma_3 \frac{\text{Pop } 25_t}{\text{Pop } 25_{2000}}\right) \quad (3)$$

$$1.013 = \left[0.16\left(\frac{85.9}{87.2}\right) + 0.21\left(\frac{5245}{5060}\right) + 0.63\left(\frac{0.531}{0.526}\right)\right] \quad (4)$$

Finally, each index is multiplied by 100.

Key Performance Indicator Composite Index Components

The three indexes contain a total of nine components covering annual data in South Carolina from the year 2000 to the present. The components were chosen based on their widespread acceptance in economic development literature as key components of economic growth as well as their relationship with growth in per capita personal income based on regression analysis. The nine components are as follows:

Employment Rate: The percent of the South Carolina labor force employed in a particular year was obtained from the US Department of Labor's Local Area Unemployment statistics.

Real State Gross Domestic Product per Capita: The US Census Bureau provides information on both annual population estimates as well as the annual value of the state's GDP. State GDP was divided by the population estimate in each year to put it in per capita terms.

Personal Income per Capita: This is a measure of how much each individual receives, in monetary terms, of the yearly income generated in the state. The data comes from the Bureau of Economic Analysis Local Area Personal Income Statistics.

Poverty Rate: This is the percent of the population falling below the federal poverty line. The data source is the US Census Bureau.

Crime Rate: This is a measure of the number of violent and property crimes per 100,000 individuals. The data is obtained from the FBI's Uniform Crime Report.

Percent of the Population 25-64: This is a measure of what percent of the state's population is of working age, 25-64. The data source is the US Census Bureau.

Percent of the Population 25+ with a Bachelor's Degree or more: These are educational attainment figures obtained from the American Community Survey and the US Census Bureau.

Foreign Direct Investment per Capita: The value of FDI is obtained from the *Survey of Current Business* and *Foreign Direct Investment in the United States, Operations of US Affiliates of Foreign Companies* through the Bureau of Economic Analysis. It is adjusted with population estimates from the US Census Bureau.

Industry Research and Development as a Percentage of GDP: This is the value of R&D by industry divided by the state's GDP. The National Science Foundation provided the R&D numbers and the GDP figures come from the US Census Bureau.

Each component is also labeled with a positive or negative indicator. These indicators establish in which components the state has out-performed, under-performed, or is equal to the national average over a one-year period (Table 1).

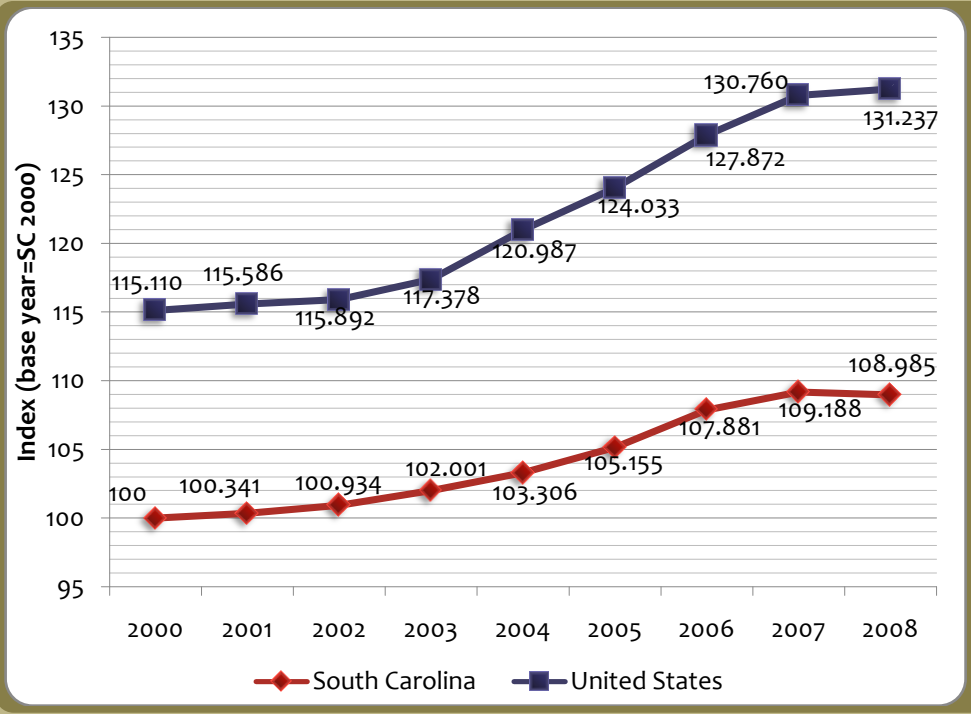
Table 1. Key Performance Indicator Legend

Symbol	Meaning
	Performed better than the national average
	Performed worse than the national average
	Performed equally with the national average

Supplemental Data

Recognizing that these indicators are not the sole measures for assessing growth or decline in a region, supplemental information covering such factors as wages, the labor force, and occupational growth are studied alongside these overarching indicators. This study attempts to move beyond merely looking at growth rates but also seeks to answer more specific questions regarding which underlying factors contribute to growth or decline in the state and how various economic measures have deeper implications for assessing economic development in the state.

South Carolina Key Performance Indicators: Economy



Economy Composite Index

South Carolina versus the United States

Economic growth in South Carolina has been a mixed picture. While areas such as employment have increased in nominal terms, other areas such as gross domestic product per capita have remained relatively flat. This has led to the state's economy improving yet still consistently underperforming the nation in an array of economic metrics.

Key Findings

Employment, 2000-2008

Employment in South Carolina increased by 4.3%, less than the 6.2% increase experienced by the United States from 2000-2008. During this same time, the state's labor force grew by 8.3%, outpacing employment growth and resulting in rising unemployment, with the number of unemployed workers more than doubling during this time period.

Per Capita Personal Income (PCPI), 2000-2008

South Carolina's PCPI increased by 31%, less than the 33% experienced by the nation during 2000-2008. Slower wage growth, the main source of personal income, has led to a widening income disparity between the state and the nation. However, lower wages in South Carolina are mitigated by a lower cost of living, which is 14% below the national average.

Gross State Domestic Product (GDP) per Capita, 2000-2008

South Carolina's GDP per capita has remained relatively sluggish since 2000, increasing by only 1.4% during 2000-2008. This compares negatively with a national growth rate of 9.7%. Lower wage levels and lower wage growth have combined with a higher population growth rate to precipitate a lower growth rate in this indicator.

Index Components

Employment, 2008

South Carolina: 2,004,241 (decreased by 0.10% from 2007)

United States: 145,362,000 (decreased by 0.47% from 2007)

Per Capita Personal Income, 2008

South Carolina: $31,884 (increased by 2.5% from 2007)

United States: $39,751 (increased by 2.9% from 2007)

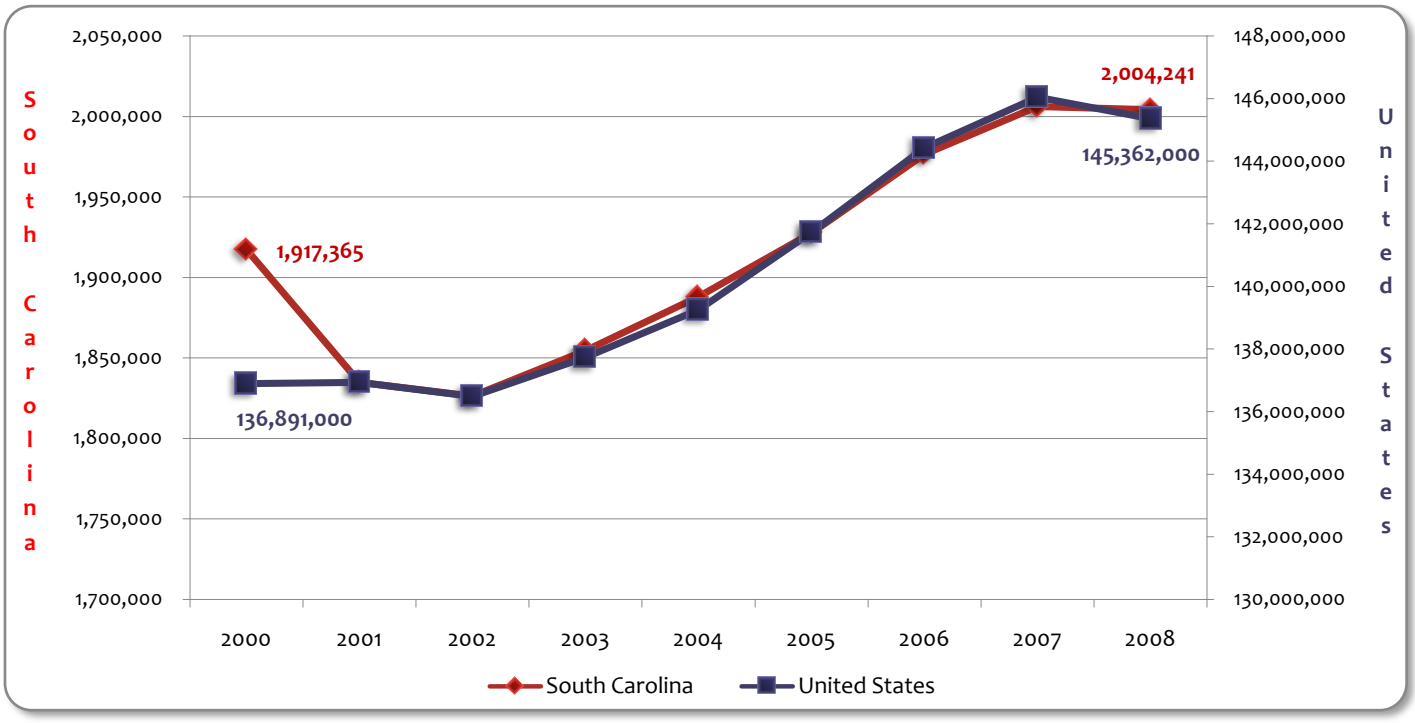
Gross State Domestic Product Per Capita, 2008

South Carolina: $28,364 (decreased by 1.1% from 2007)

United States: $37,899 (decreased by 0.2% from 2007)

Economic Indicator: Employment

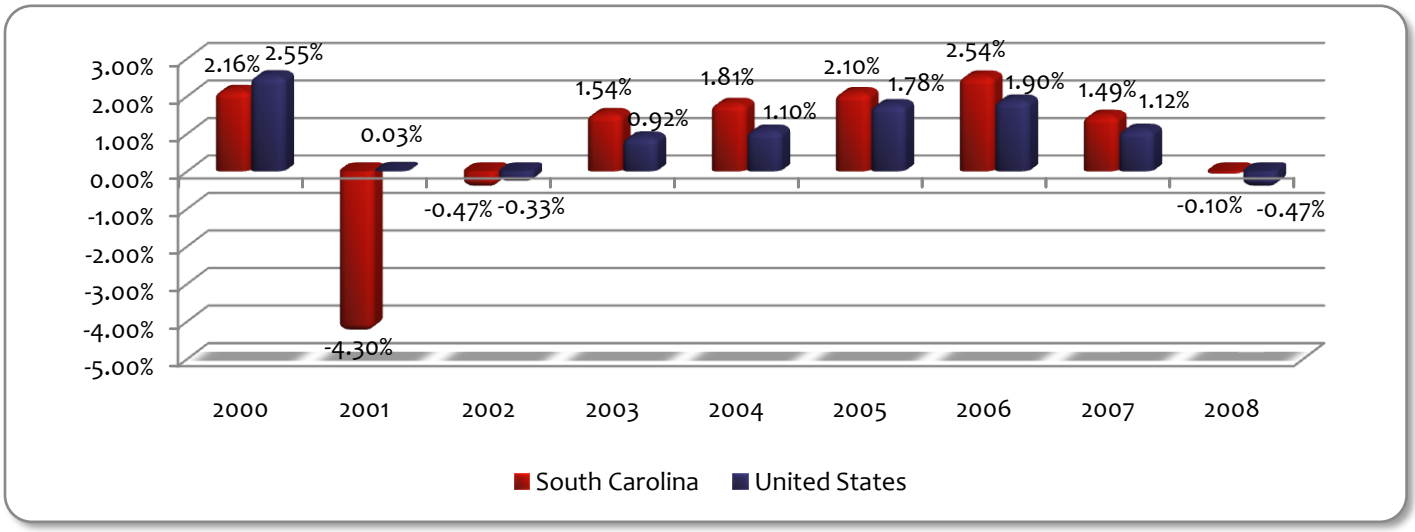
Figure 1.1 Employment: South Carolina versus the United States



Source: Current Employment Statistics, Bureau of Labor Statistics

Employment in South Carolina rose steadily from 2002 through 2008, mirroring the trend of the United States (Figure 1.1). In percentage terms, South Carolina's employment growth outpaced that of the United States during this same time period (Figure 1.2). However, the weakening economic climate in 2008 resulted in negative employment growth in South Carolina and the United States, with the nation's employment contracting more than the state's.

Figure 1.2 Yearly Percent Growth in Employment, 2000-2008



Source: Current Employment Statistics, Bureau of Labor Statistics

Table 1.3 Employment by Industry, 2000-2008

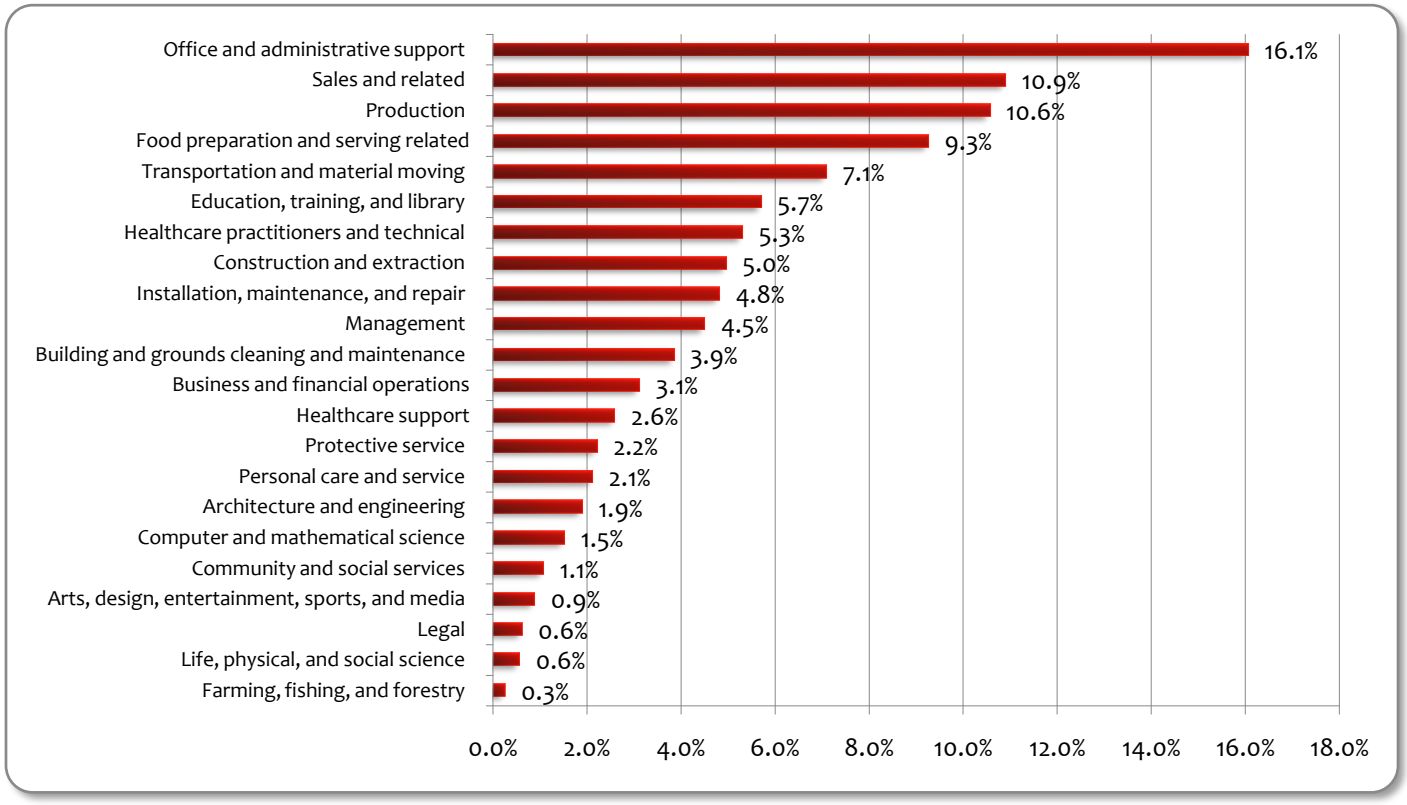
Industry	2000 Employment	2008 Employment	Growth, 2000-2008
Natural Resources and Mining	5,500	4,300	-21.80%
Construction	114,500	114,200	-0.30%
Manufacturing	336,200	242,400	-27.90%
Trade, Transportation, and Utilities	364,300	372,800	2.30%
Retail Trade	237,000	237,100	0.00%
Transportation and Warehousing	64,400	64,700	0.50%
Information	30,500	28,800	-5.60%
Financial Activities	87,400	106,200	21.50%
Professional and Business Services	195,300	220,400	12.90%
Education and Health Services	156,200	207,400	32.80%
Leisure and Hospitality	187,200	215,600	15.20%
Other Services	58,700	71,100	21.10%
Government	322,800	344,500	6.70%

Source: Current Employment Statistics, Bureau of Labor Statistics

While South Carolina saw overall growth in employment in 2000-2008, the state did lose a significant number of jobs in the high-paying manufacturing sector (Table 1.3), primarily driven by the textile-heavy, non-durable goods subsector. These losses were partially offset by gains in the financial sector and the professional and business services sector, as both these industries pay comparable or higher wages than the manufacturing industry. Most of the remainder of employment growth occurred in sectors with relatively lower average wages, including education and health services, leisure and hospitality, and other services.

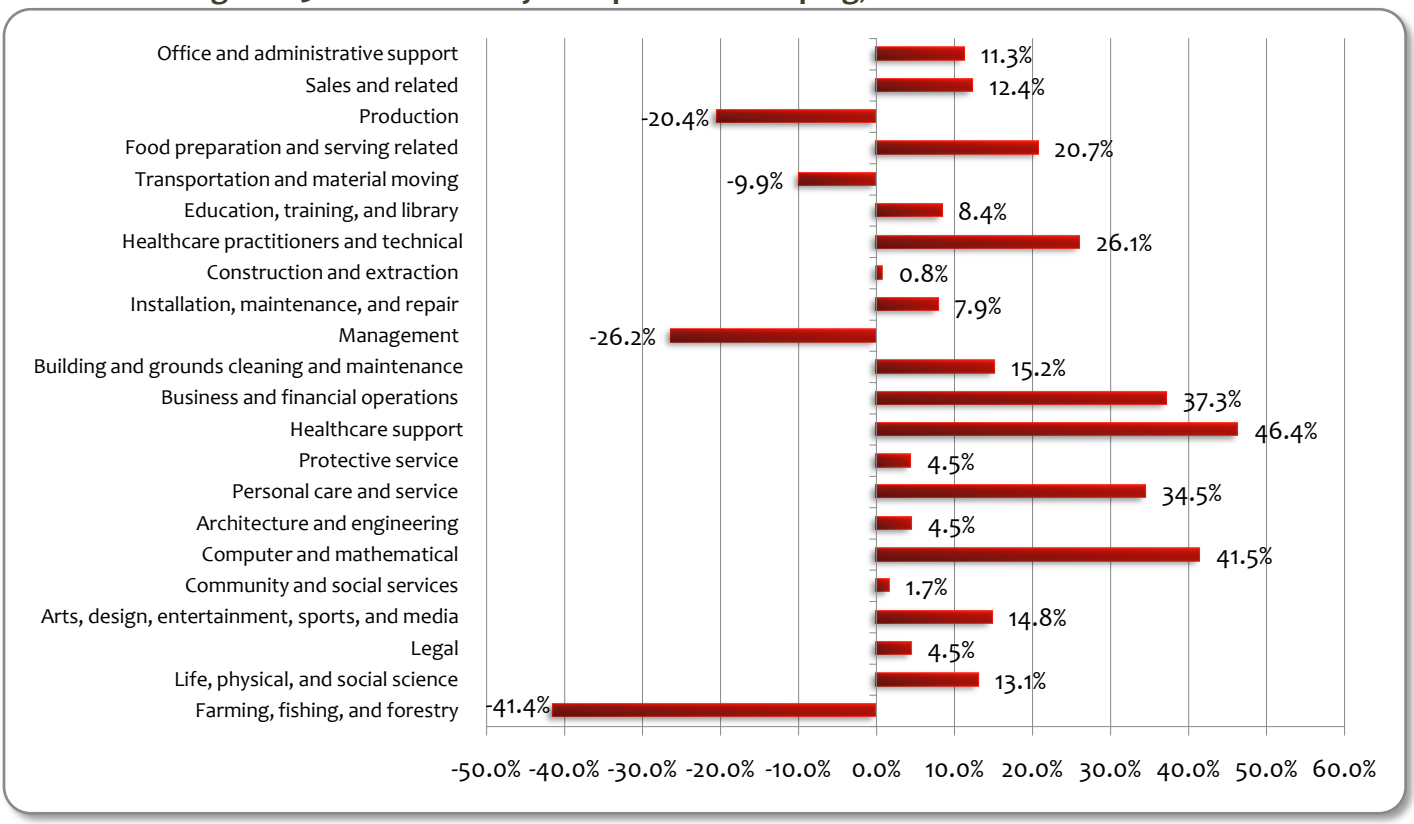
Overall, employment levels have grown in South Carolina, leading to the specific question of what types of jobs are being created in the state. Occupational employment, as compiled by the Occupational Employment Statistics (OES) series from the Bureau of Labor Statistics (BLS) addresses this issue. It breaks down employment by specific occupations, versus the Quarterly Census of Employment and Wages (QCEW) which counts all employment by specific industries. OES data reveals the largest occupational groupings in the state are office and administrative workers, followed by sales and related occupations, production occupations, and food preparation and serving related occupations (Figure 1.4). Encouragingly, some of the fastest-growing occupations include those which require high-skill sets, including computer and mathematical occupations and business and financial operation occupations. However, occupations such as healthcare support and personal care and service have also rapidly grown, adding jobs to already large occupational sectors with lower wages (Figure 1.5).

Figure 1.4 Percent of Total Employment by Occupation, South Carolina 2008



Source: Occupational Employment Statistics, Bureau of Labor Statistics

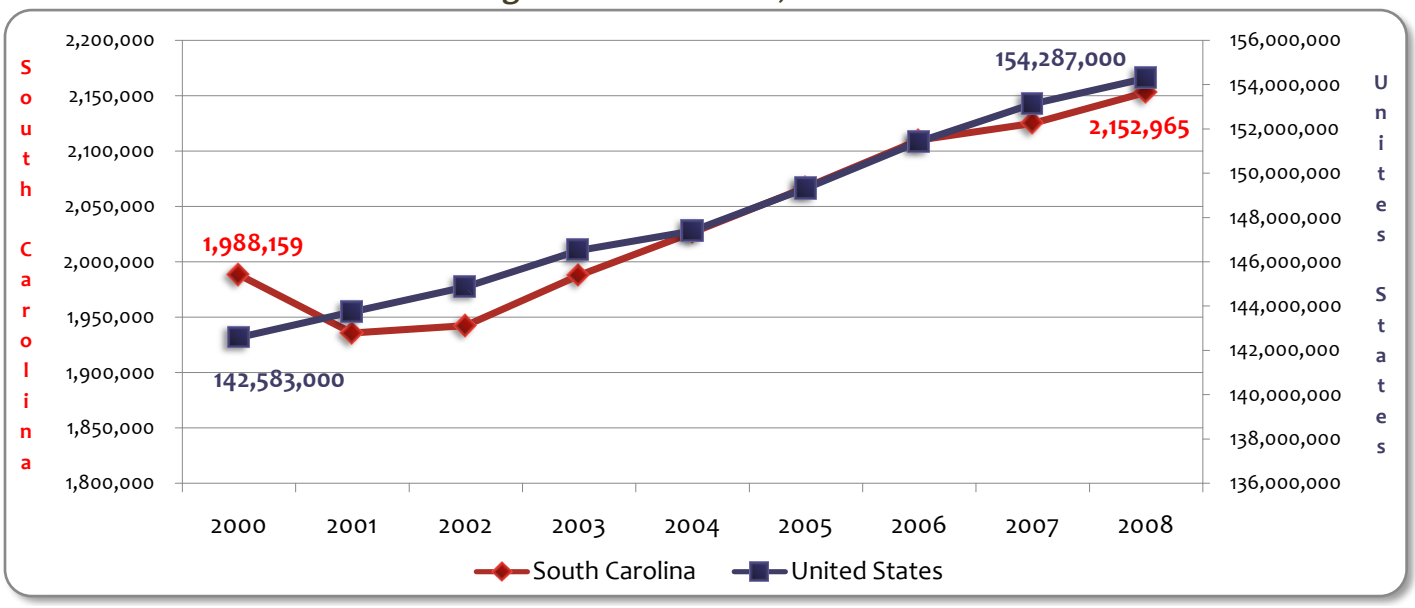
Figure 1.5 Growth Rate by Occupational Grouping, South Carolina 2000-2008



Source: Occupational Employment Statistics, Bureau of Labor Statistics

Labor Force

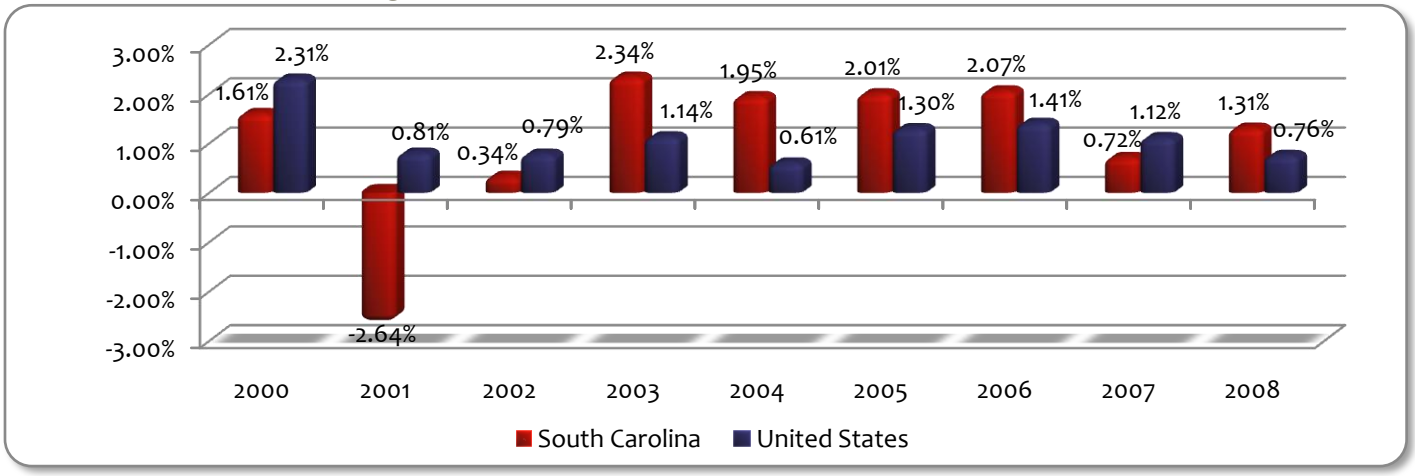
Figure 1.6 Labor Force, 2000-2008



Source: Local Area Unemployment Statistics, Bureau of Labor Statistics

Growth in South Carolina's labor force from 2000 to 2008 (Figure 1.6) mirrors to some degree the growth in employment as shown in Figure 1.1. The state's labor force contracted sharply during 2001, and then subsequently experienced positive growth from year to year (Figure 1.7). While labor force growth is typically viewed as positive, it can have negative implications when said growth outpaces employment growth. During 2001 to 2004, labor force growth outpaced employment growth, leading to rising unemployment in South Carolina. By 2005-2008, labor force growth rates were largely in line with employment growth rates; however, a legacy of unemployed members of the labor force remained. The economic downturn in 2008 once again exacerbated unemployment, as South Carolina's labor force resumed growing faster than employment, precipitating a spike in unemployment.

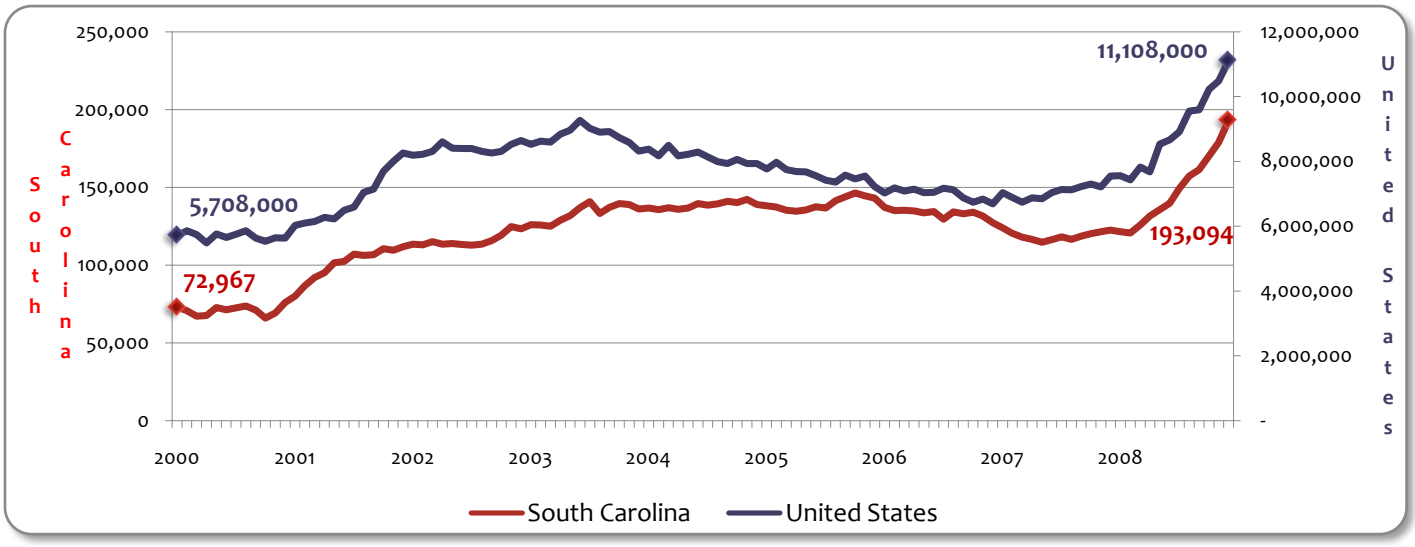
Figure 1.7 Yearly Growth in Labor Force, 2000-2008



Source: Local Area Unemployment Statistics, Bureau of Labor Statistics

Unemployment

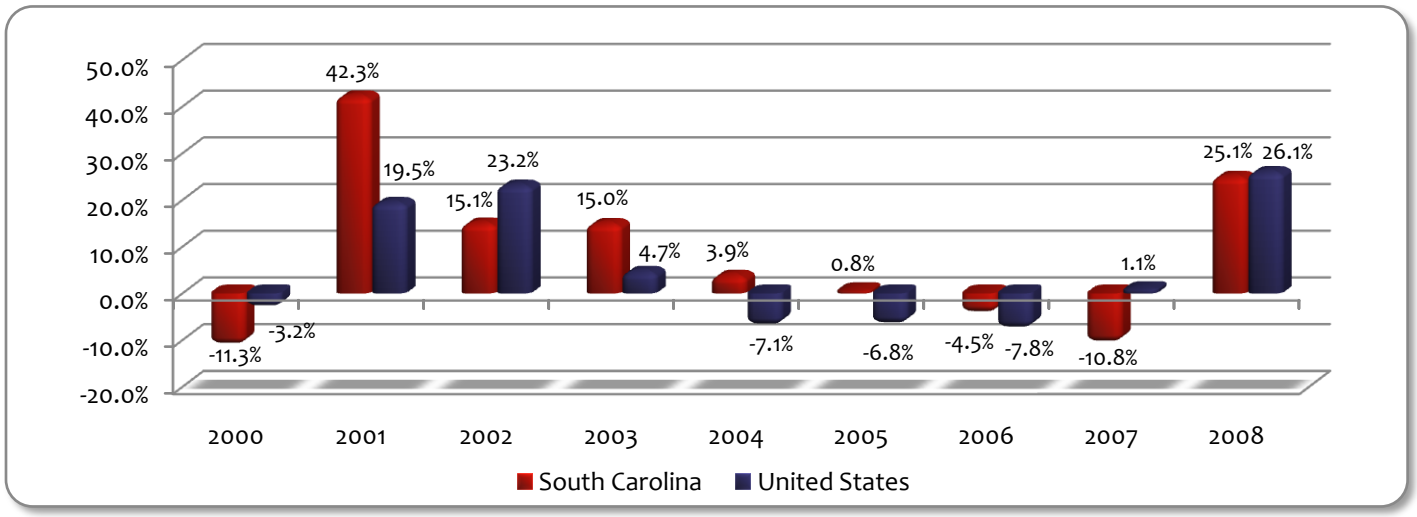
Figure 1.8 Unemployed Members of the Labor Force, 2000-2008



Source: Local Area Unemployment Statistics, Bureau of Labor Statistics

In 2000, there were nearly 73,000 unemployed people in South Carolina, versus over 5.7 million in the United States, which translated into a lower unemployment rate for the state than the nation during this time (Figure 1.8). However, as the full ramifications of the 2001 recession began working their way through the economy, the number of unemployed people began increasing at a much higher pace in South Carolina than in the United States (Figure 1.9). Further factors also fueled rising unemployment, such as China's entrance into the World Trade Organization in 2001 and its subsequent effect on American-based manufacturing. These events precipitated the number of unemployed workers in the state rising quicker than the nation and a sharp rise in unemployment. This is reflected in the economic index, as the rapid rise in the unemployment between 2000 and 2008 contributed to the widening gap between the index's value for South Carolina compared to the United States.

Table 1.9 Yearly Growth in Unemployed Persons, 2000-2008



Source: Local Area Unemployment Statistics, Bureau of Labor Statistics

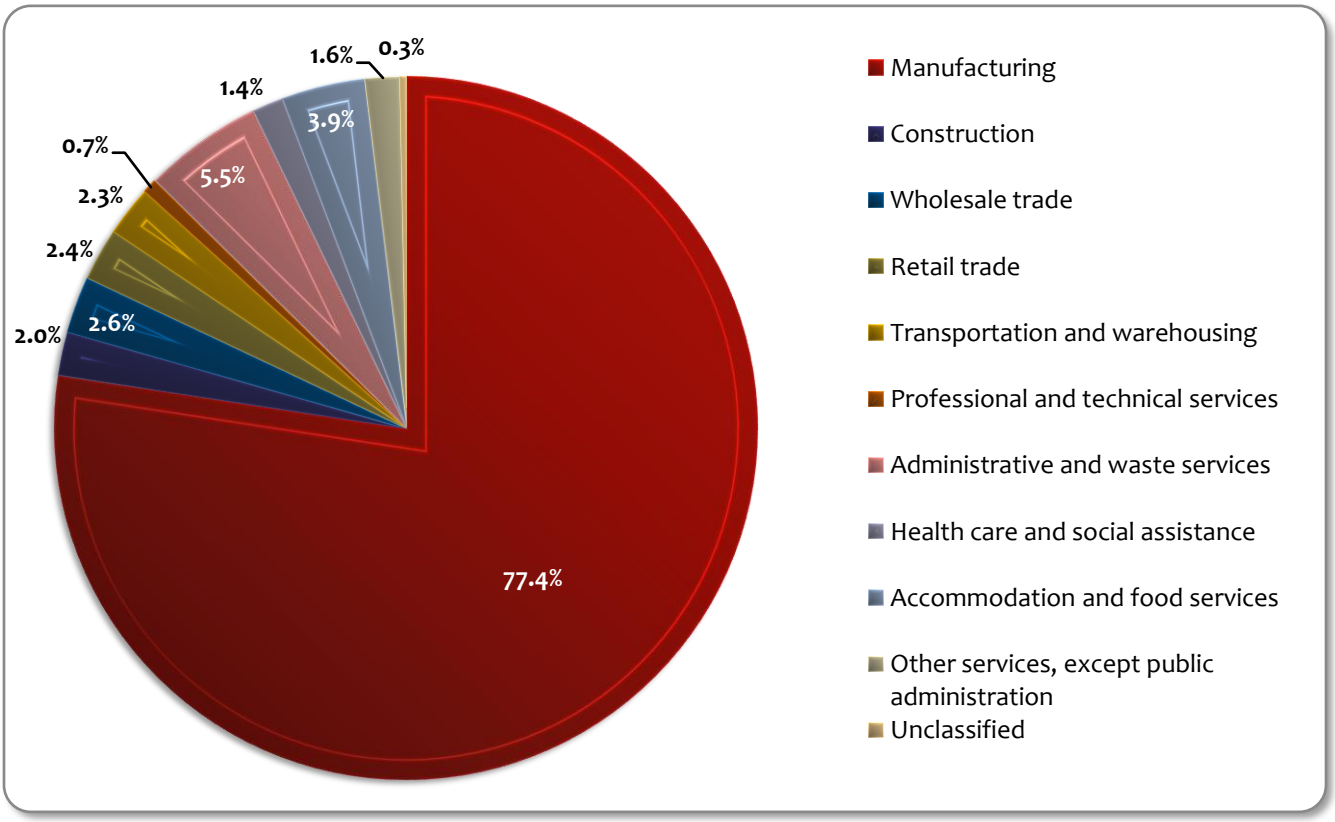
Table 1.10 State Layoffs and Job Losses (Mass Layoff Statistics), 2000-2008

Year	Layoff Events*	Total Initial Claimants from Mass Layoff Events
2000	288	45,084
2001	452	74,891
2002	364	51,006
2003	170	21,001
2004	159	22,241
2005	142	17,450
2006	140	16,909
2007	177	21,787
2008	284	32,063
Total	**2,176**	**302,432**

Source: Mass Layoff Statistics, Bureau of Labor Statistics. *Layoff events includes only those affecting 50 or more people.

Contributing to increasing unemployment in South Carolina is job destruction. South Carolina lost an average of over 33,000 jobs a year and experienced an average of 241 layoffs due to mass layoff events from 2000-2008 (Table 1.10). A significant number of these job losses stemmed from the contracting manufacturing sector, particularly driven by the textile-heavy, non-durable goods subsector. In 2008, the manufacturing industry was responsible for over 77% of job destruction from mass layoff events (Table 1.11).

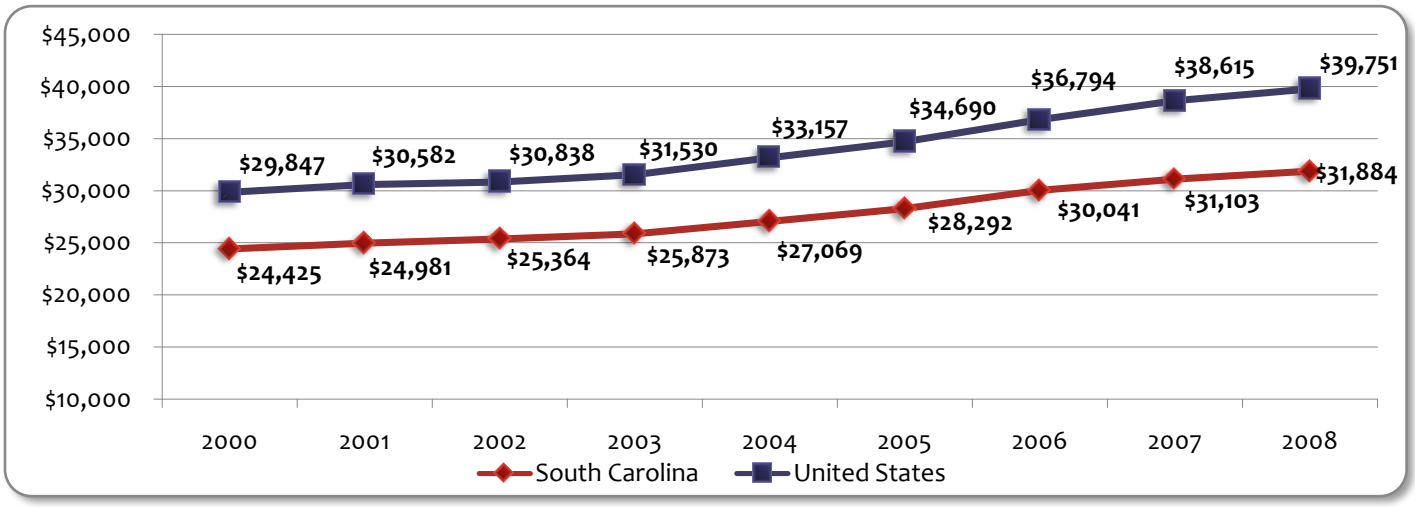
Table 1.11 Percent of Job Losses* by Industry (Mass Layoff Statistics), South Carolina 2008



Source: Mass Layoff Statistics, Bureau of Labor Statistics. *Job losses are based upon initial claimant data from mass layoff events affecting 50 or more people.

Economic Indicator: Income

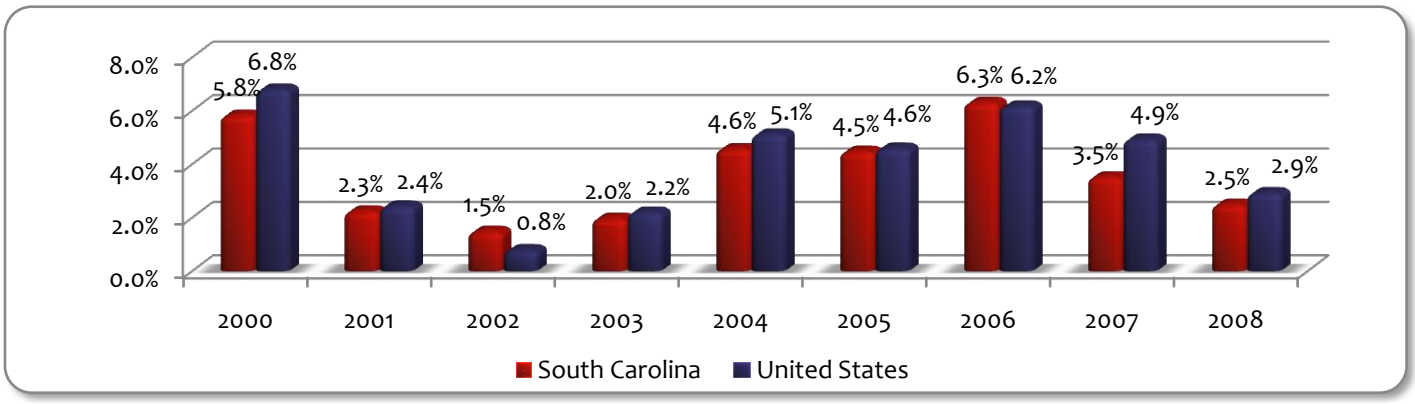
Figure 1.12 Per Capita Personal Income (in current dollars)



Source: Local Area Personal Income, Bureau of Economic Analysis

Per capita personal income (PCPI) is the second component of the Economic Index. Personal income is defined by the Bureau of Economic Analysis (BEA) as "net earnings by place of residence; dividend, interest, and rent; and personal current transfer receipts received by residents."[1] PCPI in South Carolina has risen steadily from 2000 to 2008 (Figure 1.12); however, with the exceptions in 2002 and 2006, annual growth rates have lagged those of the United States (Figure 1.13). Typically a rise in PCPI would contribute to a rise in the economic index; however, the faster growth in national PCPI has contributed to a widening gap in the index between South Carolina and the United States. However, PCPI statistics may overstate the difference between the nation and the state to some degree due to differences in the cost of living. For example, the cost of living index in 2007 for South Carolina was only 0.86 compared to 1.00 for the nation,[2] meaning the purchasing power of $1 of income in South Carolina is higher than the purchasing power of $1 nationally, and Figures 1.12 and 1.13 do not take into account this difference.

Figure 1.13 Yearly Percent Growth in Per Capita Personal Income



Source: Local Area Personal Income, Bureau of Economic Analysis

[1] Bureau of Economic Analysis, Regional Economic Accounts, BEARFACTS 1996-2006, U.S. Department of Commerce.
[2] W. Wang, L. Massoudie, and R. Gunnlaugsson, "Annual Cost of Living Index: Applied to South Carolina Sub-state Areas," (SC Department of Commerce, Jan. 2009).

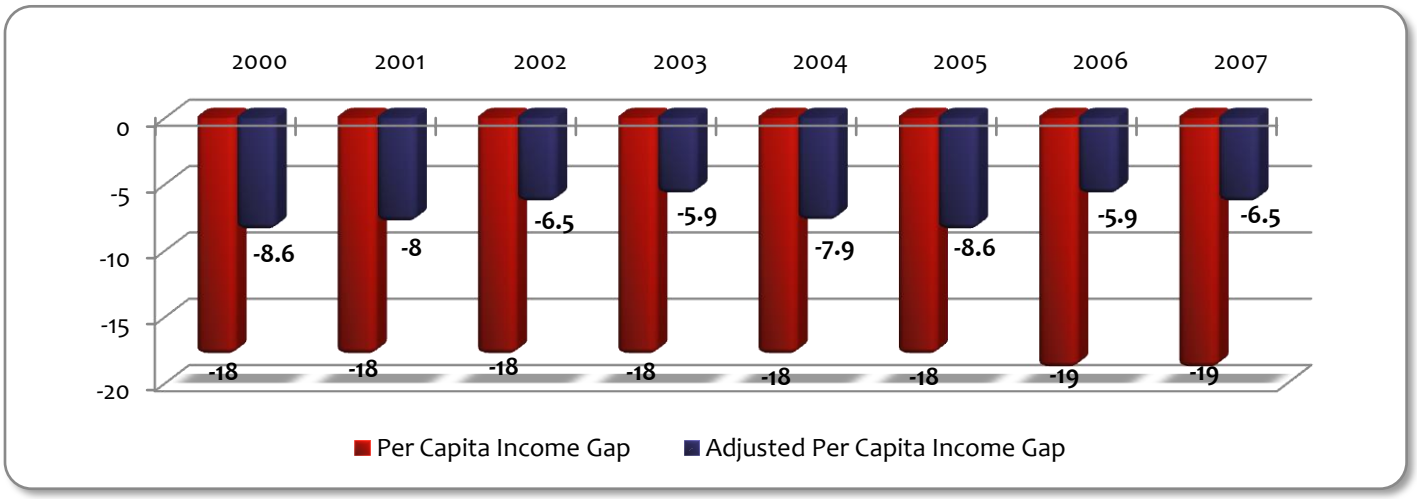
Table 1.14 South Carolina Per Capita Personal Income National Rank, 2000-2007

Year	Per Capita Income	National Rank	Adjusted Per Capita Income	Adjusted Per Capita Income, National Rank
2000	$24,423	39	$27,288	33
2001	$24,974	41	$28,124	33
2002	$25,348	42	$28,805	32
2003	$25,852	43	$29,647	32
2004	$27,039	44	$30,518	35
2005	$28,254	43	$31,657	34
2006	$30,041	44	$34,573	32
2007	$31,103	44	$36,124	33

Source: Local Area Personal Income, Bureau of Economic Analysis

South Carolina's PCPI consistently ranks in the bottom 10 nationally (Table 1.14) and is roughly 80% of the national average PCPI (Figure 1.15). Since 2000, South Carolina's PCPI has declined in rankings comparing it to other states, despite the rise in nominal values of PCPI. Similarly during this time, the gap between the state's average PCPI and the nation's average PCPI remained stagnant then widened in 2006. The unadjusted numbers in Table 1.14 and 1.15 do not account for the varying in cost of living in South Carolina compared to the United States. The final two columns of Table 1.14 adjust PCPI to reflect the state's 14% lower cost of living compared to the US, while Figure 1.15 also illustrates the gap in PCPI between the state and the US after adjusting for cost of living differences. Although the gap between the two narrows, South Carolina still lags the national average PCPI across this time period.

Figure 1.15 Per Capita Personal Income Gap, 2000-2007
(percentage points South Carolina lags United States)



Source: Bureau of Economic Analysis, US Department of Commerce

The single biggest contributor to personal income is net earnings, accounting for 64.7% of total personal income in South Carolina.[3] Thus, rising or declining earnings levels have a significant impact on income levels. By combining earnings data with the aforementioned occupational and industrial data, a more detailed picture of the interplay amongst income, employment, and occupations in the state emerges. In terms of per capita income, 70% of South

[3] Bureau of Economic Analysis, State BEARFACTS, South Carolina, 2007, U.S. Department of Commerce.

Carolina's workers earn less than the hourly wage needed to earn the state's average PCPI ($15.33), and 76.7% earn less than the wage needed to earn the national average PCPI ($19.11) (Table 1.16).[4]

Figure 1.16 Occupational Growth and Wages, South Carolina 2000-2008

Occupational Title	Percent of Total Employment	Growth, 2000-2008	Jobs Added, 2000-2008	2008 Median Wage
Food Preparation and Serving Related	9.30%	20.70%	30,090	$7.67
Personal Care and Service	2.10%	34.50%	10,310	$9.05
Building & Grounds Cleaning & Maintenance	3.90%	15.20%	9,630	$9.45
Sales and Related	10.90%	12.40%	22,720	$10.23
Healthcare Support	2.60%	46.40%	15,590	$10.42
Farming, Fishing, and Forestry	0.30%	-41.40%	-3,490	$11.55
Transportation and Material Moving	7.10%	-9.90%	-14,740	$11.92
Office and Administrative Support	16.10%	11.30%	30,960	$13.17
Production	10.60%	-20.40%	-51,260	$13.88
Protective Service	2.20%	4.50%	1,790	$14.45
Construction and Extraction	5.00%	0.80%	780	$14.88
Wage Needed to Earn State Average PCPI				$15.33
Community and Social Services	1.10%	1.70%	340	$15.96
Arts, Design, Entertainment, Sports, and Media	0.90%	14.80%	2,190	$16.07
Installation, Maintenance, and Repair	4.80%	7.90%	6,710	$16.97
Wage Needed to Earn National Average PCPI				$19.11
Education, Training, and Library	5.70%	8.40%	8,390	$19.86
Legal	0.60%	4.50%	510	$23.54
Business and Financial Operations	3.10%	37.30%	16,030	$24.05
Life, Physical, and Social Science	0.60%	13.10%	1,260	$24.14
Healthcare Practitioners and Technical	5.30%	26.10%	20,790	$24.15
Computer and Mathematical	1.50%	41.50%	8,480	$27.73
Architecture and Engineering	1.90%	4.50%	1,560	$30.20
Management	4.50%	-26.20%	-30,300	$37.15

Source: Occupational Employment Statistics, Bureau of Labor Statistics

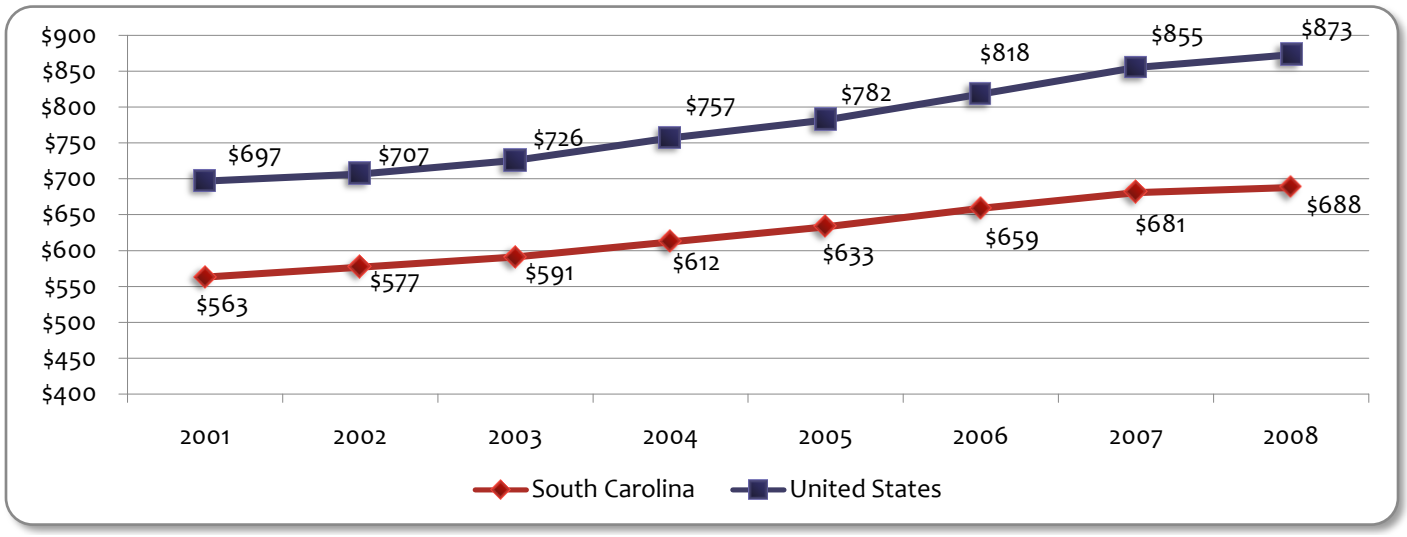
This scenario presents an assortment of strengths and weaknesses for South Carolina. Higher-paid occupations such as computer and mathematical occupations have grown by more than 40% in 2000-2008, and generally, occupations paying more than the hourly wage needed to earn the national PCPI experienced positive growth during this same time. This growth has contributed to economic development by helping to raise per capita income. However, these highly-paid occupational groups represent less than a quarter of the workforce, and the positive effects of growth in these occupations have been mitigated by mediocre growth in low-paying occupations (Figure 1.16). For example, the 40% growth in computer and mathematical occupations translated to just over 8,400 jobs being added in this sector in 2000-2008. The growth rate of the largest occupational grouping—office and administrative support—was just over 11% during this same period; however, because of the sheer volume of workers in this low-paid occupation, nearly 31,000 jobs were added this sector alone, easily outpacing the 40% growth and 8,400 jobs added

[4] Based on BEA per capita personal income figures of $31,884 for South Carolina and $39,751 for the United States, and a 40-hour work week.

in computer and mathematical occupations. Even including the more than 51,000 jobs shed in production occupations, low-paying occupations still added over 16,000 more jobs than higher-paid occupations in South Carolina in 2000-2008.

Wages

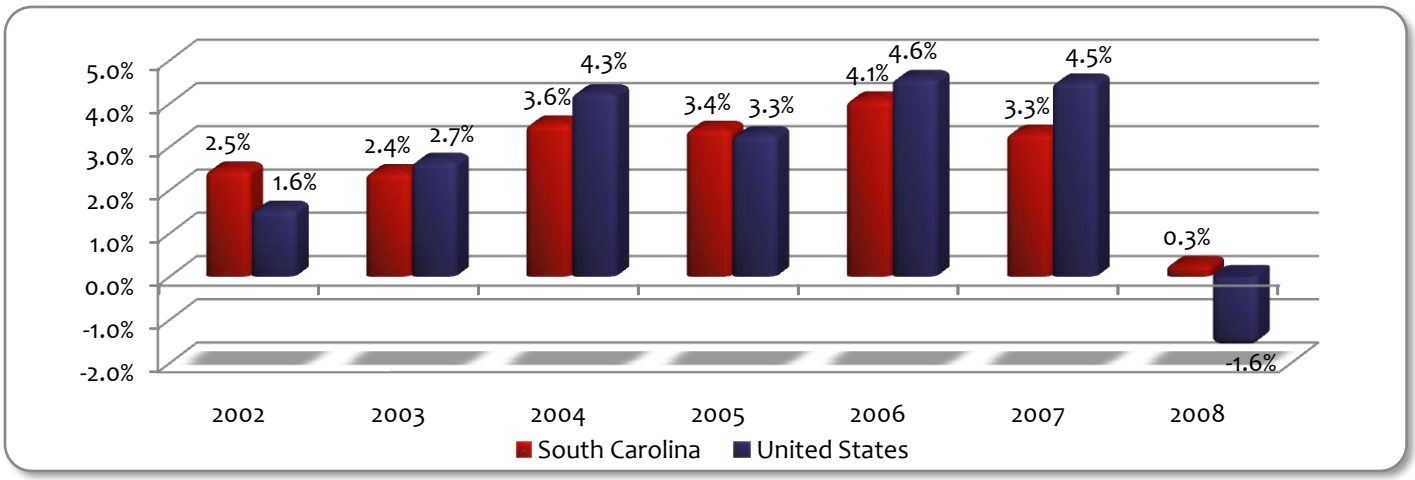
Figure 1.17 Average Weekly Wages



Source: Quarterly Census of Employment and Wages, Bureau of Labor Statistics

Just as earnings are the biggest single component of personal income, wage and salary disbursements are by far the largest single component of earnings. Consequently, increases or declines in wages will have a significant impact on earnings, and thus on per capita income. Average weekly wages in both South Carolina and the United States have increased since 2001 although at differing rates (Table 1.17). Overall, weekly wage growth in the United States has typically outpaced South Carolina's wage growth rates (Table 1.18). This is accounted for, in part, by the rapid growth in lower paid occupations in the state, as highlighted previous by Table 1.16. While new jobs are being created, the sheer volume of lower-paid occupations versus higher-paid occupations weighed negatively on wage growth, and thus per capita income in South Carolina. The recession of 2008 resulted in declining wages for both economies; however, South Carolina wages did maintain modest growth of 0.3% versus a contraction of 1.6% in national wages.

Figure 1.18 Yearly Percent Change in Weekly Wages



Source: Quarterly Census of Employment and Wages, Bureau of Labor Statistics

Weekly wages for all industries in South Carolina are 22% below the national average, with the greatest disparities arising in industries such as mining; management of companies; and arts, entertainment, and recreation (Table 1.19). Consistently lower wages across the majority of industries have made South Carolina an attractive place to do business by industry standards, but have negatively contributed to closing the income divide between the state and the nation. Again, these wage figures are nominal do not take into account the state's lower cost of living.

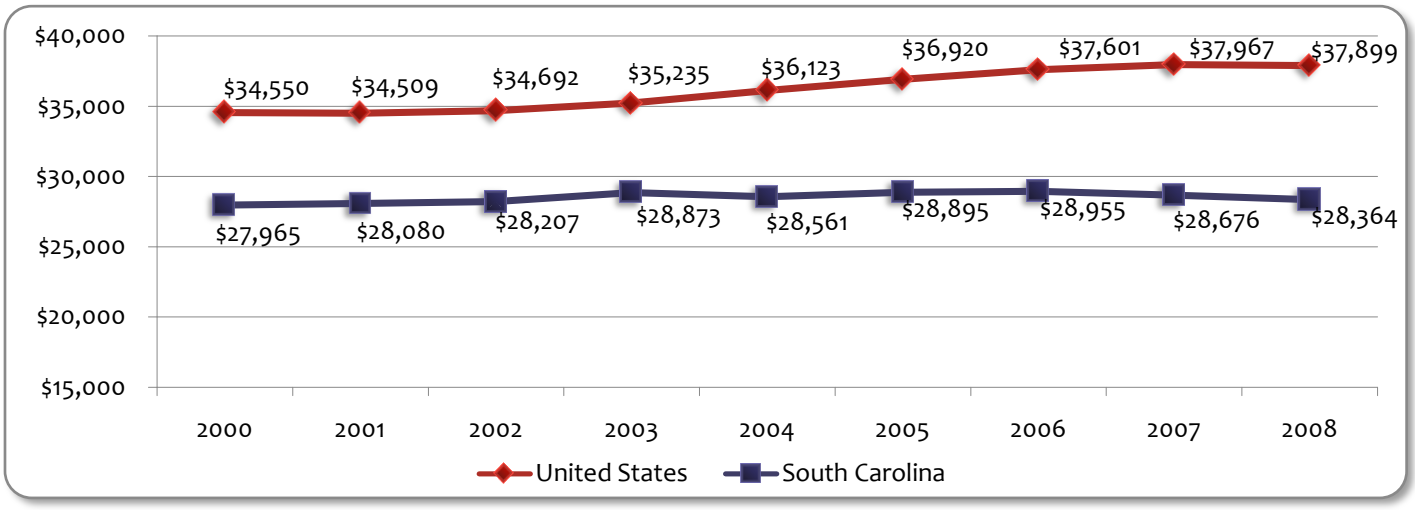
Table 1.19 Average Weekly Wage by Industry, 2008

Industry	SC Average Weekly Wage	US Average Weekly Wage	Percent Above/Below National Average
Agriculture, Forestry, Fishing and Hunting	$547	$487	12.30%
Mining	$894	$1,825	-51.00%
Utilities	$1,542	$1,910	-19.30%
Construction	$755	$898	-15.90%
Manufacturing	$904	$1,079	-16.20%
Wholesale Trade	$1,052	$1,212	-13.20%
Retail Trade	$454	$500	-9.20%
Transportation and Warehousing	$679	$819	-17.10%
Information	$986	$1,469	-32.90%
Finance and Insurance	$1,105	$2,259	-51.10%
Real Estate and Rental and Leasing	$639	$883	-27.60%
Professional and Technical Services	$1,003	$1,396	-28.20%
Management of Companies and Enterprises	$1,305	$2,180	-40.10%
Administrative and Waste Services	$553	$617	-10.40%
Educational Services	$573	$758	-24.40%
Health Care and Social Assistance	$691	$768	-10.00%
Arts, Entertainment, and Recreation	$333	$606	-45.00%
Accommodation and Food Services	$269	$320	-15.90%
Other Services, Ex. Public Admin	$481	$547	-12.10%

Source: Quarterly Census of Employment and Wages, Bureau of Labor Statistics

Economic Indicator: Gross Domestic Product

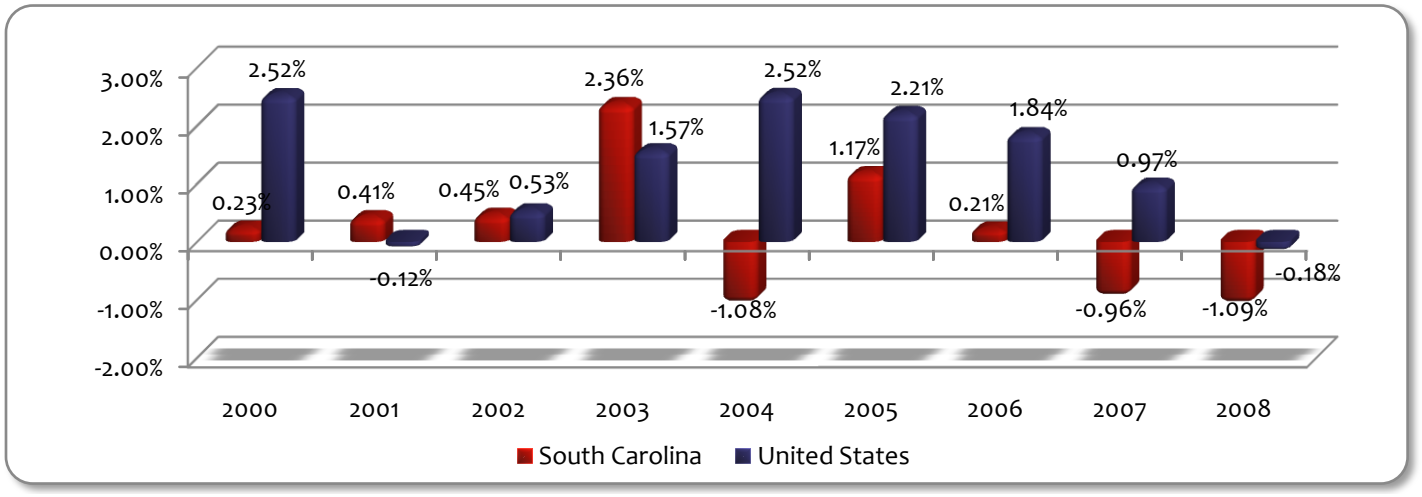
Figure 1.20 Per Capita Gross Domestic Product (chained 2000 dollars)



Source: Gross Domestic Product by State, Bureau of Economic Analysis

Gross Domestic Product (GDP) per capita is the final component of the Economy Index. State GDP per capita is an inflation-adjusted measure of a state's gross product (based on national prices for the goods and services produced within that state) divided by its population.[5] Similar to the per capita income numbers, real GDP per capita in South Carolina has experienced growth but continues to fall behind national averages (Figure 1.20). In 2000-2008, per capita GDP grew by nearly 10% in the nation, while the state's per capita GDP increased by 1.4%. The national figures declined during 2001-2003 as a result of the 2001 recession; however, by 2004, they resumed their pre-recessionary growth levels (Figure 1.21). South Carolina's economy fared just the opposite—2003-2004 saw one of the biggest declines in per capita GDP, having posted a 2.3% increase in 2003, only to decline by 1.08% by 2004. State growth rates returned to positive levels in 2005-2006 but then resumed negative growth rates in 2007 and 2008.

Figure 1.21 Yearly Percent Growth, Per Capita Gross Domestic Product (chained 2000 dollars)

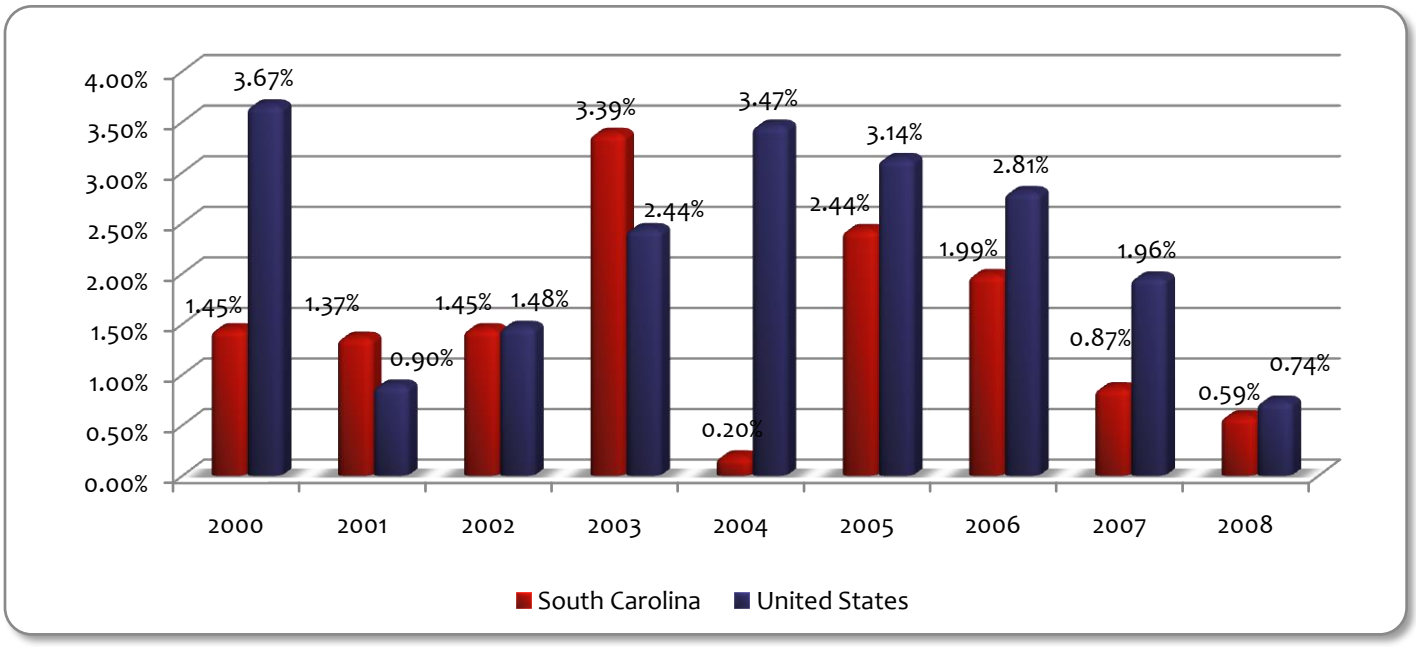


Source: Gross Domestic Product by State, Bureau of Economic Analysis

[5] Bureau of Economic Analysis, U.S. Department of Commerce.

Real GDP growth in South Carolina has shown greater volatility than the nation. Declines in real GDP growth during the 2001 recession were not as dramatic in the state than the nation as a whole; equally, post-recessionary recovery in the state was not as pronounced, with the exception of 2003 (Figure 1.22).

Figure 1.22 Real GDP Growth Rates, 2000-2008



Source: Gross Domestic Product by State, Bureau of Economic Analysis

A dramatic decline also materialized in real GDP in 2003-2004, demonstrating that it may not be population growth alone which contributed to the dramatic decrease in per capita GDP during this time. Part of this steep drop in real GDP can be traced to the manufacturing industry. The industry experienced its single biggest year-to-year decline in 2003-2004, having posting a 7.34% rise in real GDP industrial value in 2003, only to shrink by 12.44% the following year. In dollar terms, the value of Real GDP for the manufacturing industry contracted from $26.9 billion to $23.5 billion in 2003-2004.

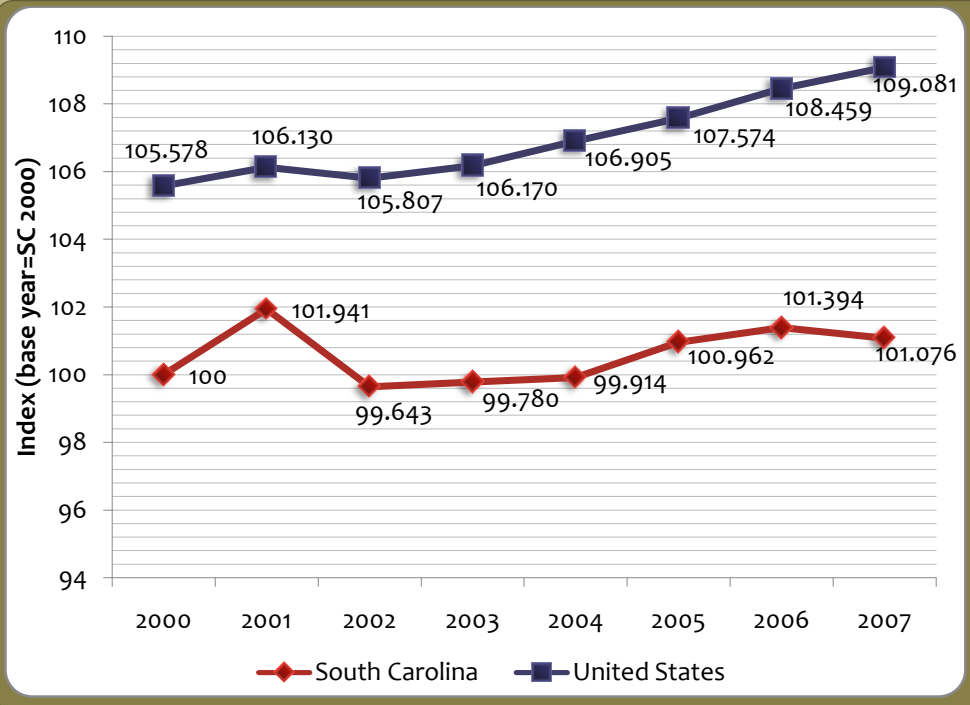
The declining value of manufacturing to the state's economy is further reflected in an industrial breakdown of contribution to GDP. Specific industrial contributions to state GDP have been fairly consistent between 2000 and 2008 with the exception of manufacturing (Table 1.23). Manufacturing's contribution fell from 20.9% in 2000 to 18.5% by 2008, with the value of the industry's contribution to state GDP remaining flat, increasing from $23.52 billion in 2000 to $23.53 billion in 2008. Encouragingly, strong growth occurred in more service-oriented industries such as professional and technical services whose contribution to state GDP grew in real terms from $4.51 billion to $7.12 billion dollars, increasing its share of state GDP by 1.59%. The information industry also grew significantly, increasing its share of contribution to state GDP by 1.5%, growing in real dollars from $2.83 billion in 2000 to $5.10 billion in 2008. Retail trade was the biggest growth industry, which increased its contribution to state GDP by 1.87%, and growing by $3.57 billion

Table 1.23 Contribution by Industry to State GDP, 2000-2008 (millions of chained 2000 dollars)

Industry	2000 Contribution to GDP	% of Total GDP, 2000	2008 Contribution to GDP	% of Total, 2008
Manufacturing	$23,522	20.91%	$23,531	18.52%
Government	$17,449	15.51%	$18,948	14.91%
Real estate and rental and leasing	$12,321	10.95%	$13,273	10.45%
Retail trade	$9,234	8.21%	$12,803	10.08%
Health care and social assistance	$5,617	4.99%	$7,734	6.09%
Wholesale trade	$6,025	5.35%	$7,560	5.95%
Professional and technical services	$4,506	4.00%	$7,107	5.59%
Finance and insurance	$4,877	4.33%	$5,933	4.67%
Information	$2,827	2.51%	$5,095	4.01%
Administrative and waste services	$4,169	3.71%	$4,748	3.74%
Construction	$6,291	5.59%	$4,466	3.51%
Accommodation and food services	$3,715	3.30%	$4,370	3.44%
Utilities	$2,934	2.61%	$3,202	2.52%
Transportation and warehousing, excluding Postal Service	$2,800	2.49%	$2,985	2.35%
Other services, except government	$2,757	2.45%	$2,858	2.25%
Arts, entertainment, and recreation	$965	0.86%	$959	0.75%
Agriculture, forestry, fishing, and hunting	$1,080	0.96%	$913	0.72%
Management of companies and enterprises	$ 706	0.63%	$853	0.67%
Educational services	$518	0.46%	$611	0.48%
Mining	$201	0.18%	$127	0.10%

Source: Gross Domestic Product by State, Bureau of Economic Analysis

South Carolina Key Performance Indicators: Community



Community Composite Index

South Carolina versus the United States

Community indicators give a mixed and mostly negative picture for South Carolina. Crime rates are below their 2000 levels; however, they remain substantially higher than the national average. The poverty rate decreased for both the state and the nation in 2006-2007, while the percent of the population of working age in South Carolina is slightly higher than the national average, but saw a slight dip in 2007.

Key Findings

Percent of Population Aged 25-64, 2000-07

During this timeframe, South Carolina's population aged 25-64 grew by 1.71%, outpacing the nation's which grew by 1.56%. However, in 2007, this working-age population decreased at a higher rate in South Carolina than the nation, despite the state's higher overall population growth rate.

Poverty Rate, 2000-2007

Poverty rates in South Carolina increased by 18.0% during 2000-2007, compared with the United States which increased by 15.0%. Poverty has steadily risen in the state with intermittent spikes, which contrasts with the nation where poverty has risen more moderately. Both South Carolina and the United States managed to reverse this trend in 2006-2007 with an overall decrease in poverty levels.

Crime Rate, 2000-2007

Crime rates—both violent and property—decreased in South Carolina by 5.4% and by 9.6% in the United States during 2000-2007. However for 2006-2007, while the nation continued to decrease its crime rate, South Carolina's increased, precipitating a widening in the Community Index value between the state and the nation.

Index Components

Percent of Population Aged 25-64, 2007

South Carolina: 53.18% (decreased by 0.29% from 2006)

United States: 53.06% (decreased by 0.057% from 2006)

Poverty Rate, 2007

South Carolina: 15.1% (decreased by 3.8% from 2006)

United States: 13.0% (decreased by 2.3% from 2006)

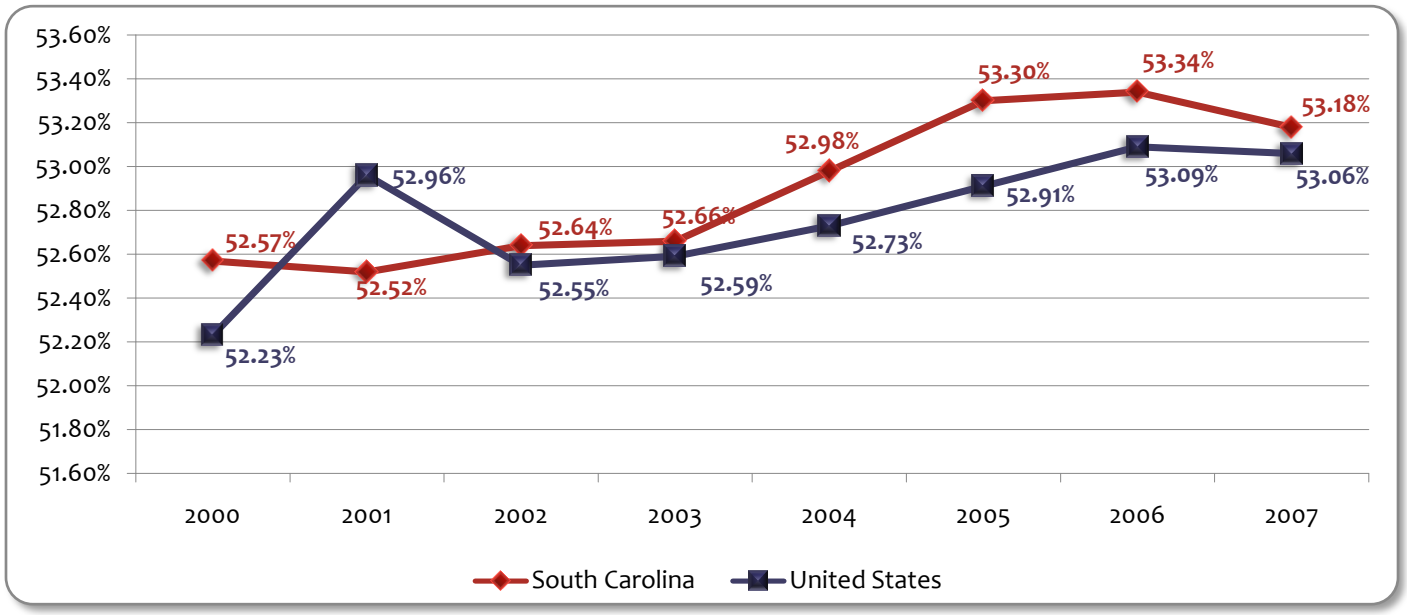
Crime Rate (per 1,000 people), 2007

South Carolina: 5,060 (increased by 1.0% from 2006)

United States: 3,730 (decreased by 2.0% from 2006)

Community Indicator: Working Age Population

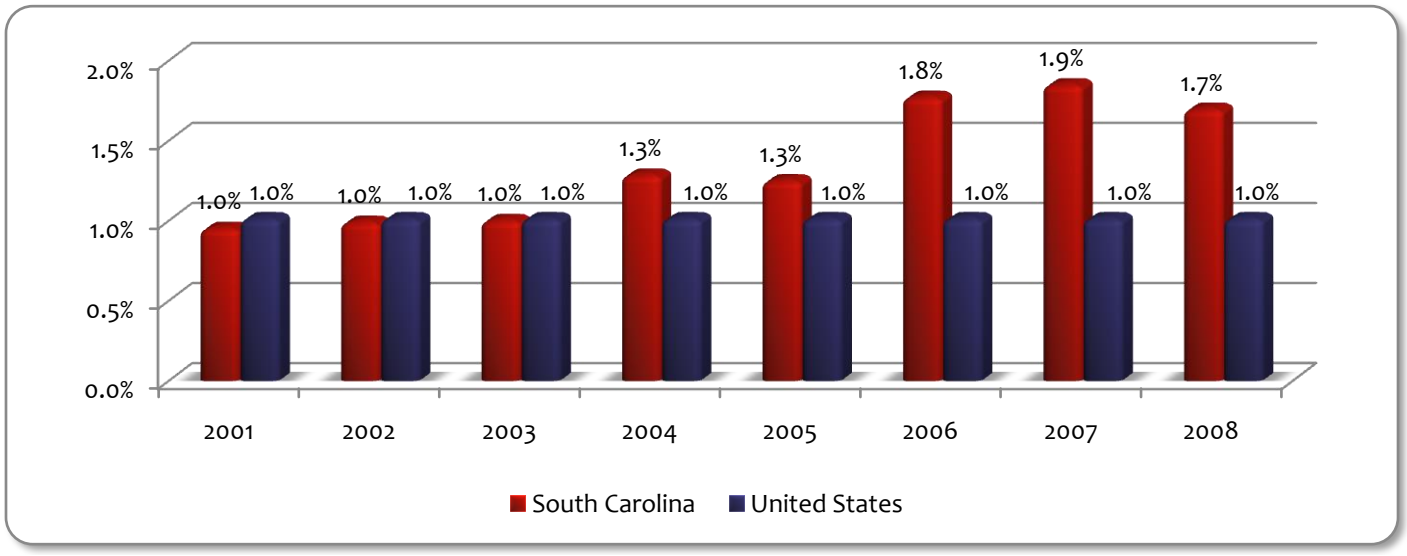
Figure 2.1 Percent of Population Aged 25-64



Source: American Community Survey, US Census Bureau

The population between ages 25-64 typically represents an area's potential labor force. South Carolina's percent of the population of working age (25-64) is slightly higher than the national average but saw a slight dip in 2007 compared to 2006 (Figure 2.1). This dip in 2007 had a negative effect on the Community Index for South Carolina, as the contraction in this group was at a higher rate than in the nation. However, over the long term, this is an encouraging measure for the state, indicating that through demographic changes, net migration, and natural population growth, there is a growing and robust labor pool in the state. South Carolina's overall population for all age groups also experienced positive growth rates, consistently outpacing the nation since 2004 (Figure 2.2).

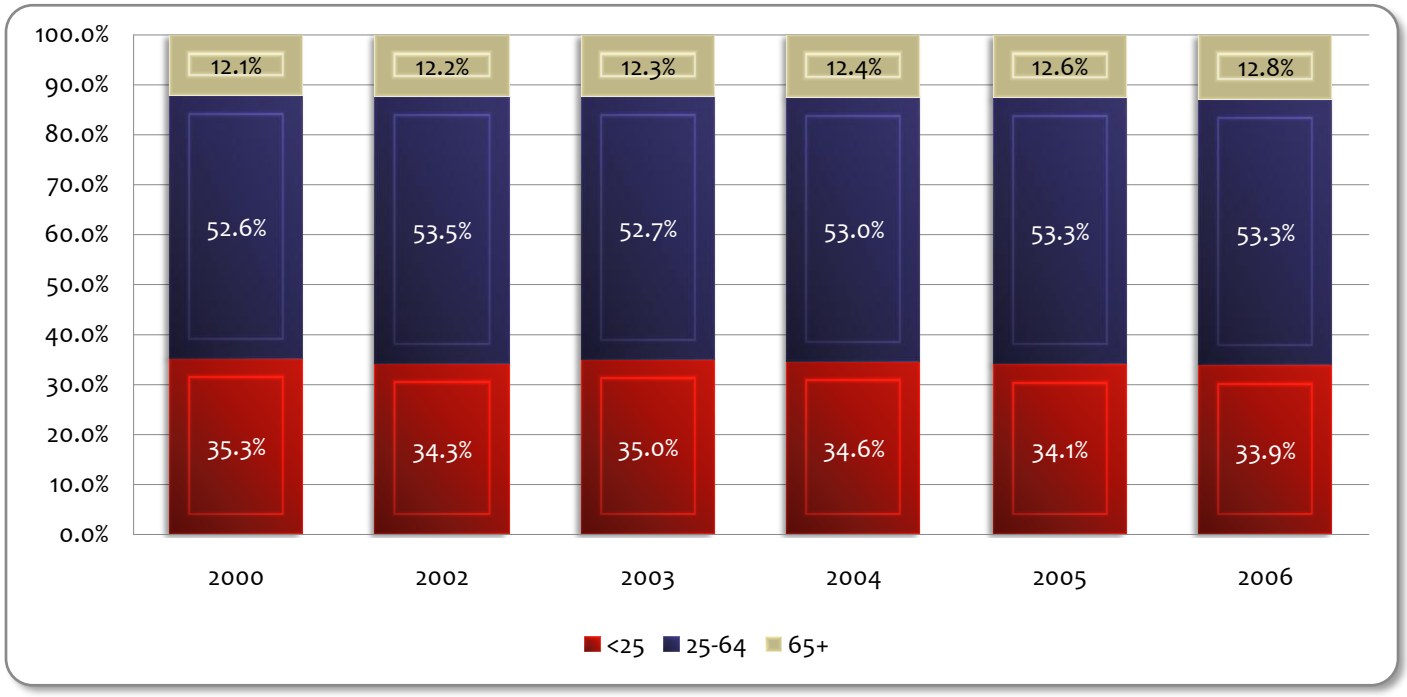
Figure 2.2 Average Annual Population Growth, 2000-2008



Source: Annual Population Estimates 2000 to 2008, US Census Bureau

Population growth alone may not contribute to long-term economic growth, but an increase in the percentage of the working age population, coinciding with increases in employment, can have strong, positive effects on per-capita income as well as other measures of the community. Mature workers with labor market experience tend to earn higher wages and save greater shares of their income compared to those yet to enter the workforce or those in retirement. Thus, an increase in the working age population and an increase in the employment rate for this age group are important factors in state economic growth. Furthermore, a large share of the population in its prime positively affects income growth due to a larger share of the population working, the accelerated accumulation of capital, and from reduced spending on dependents.[6] Figure 2.3 shows the changing age structure in South Carolina.

Figure 2.3 Population Age Structure, South Carolina 2000-2006



Source: American Community Survey, US Census Bureau

For this working aged population, commute time is a significant factor in overall perceptions of quality of life. Commute times to work for employed persons over the age of 16 have increased for both South Carolina and the United States (Table 2.4). Since 2000 South Carolina's average commute time has grown by 5.9% compared to 3.7% for the United States. Both experienced increases in 2007 over 2006. Commute times are most likely a result of economic expansion and not, in and of itself, an underlying cause.

Table 2.4 Average Commute Times 2000 versus 2007

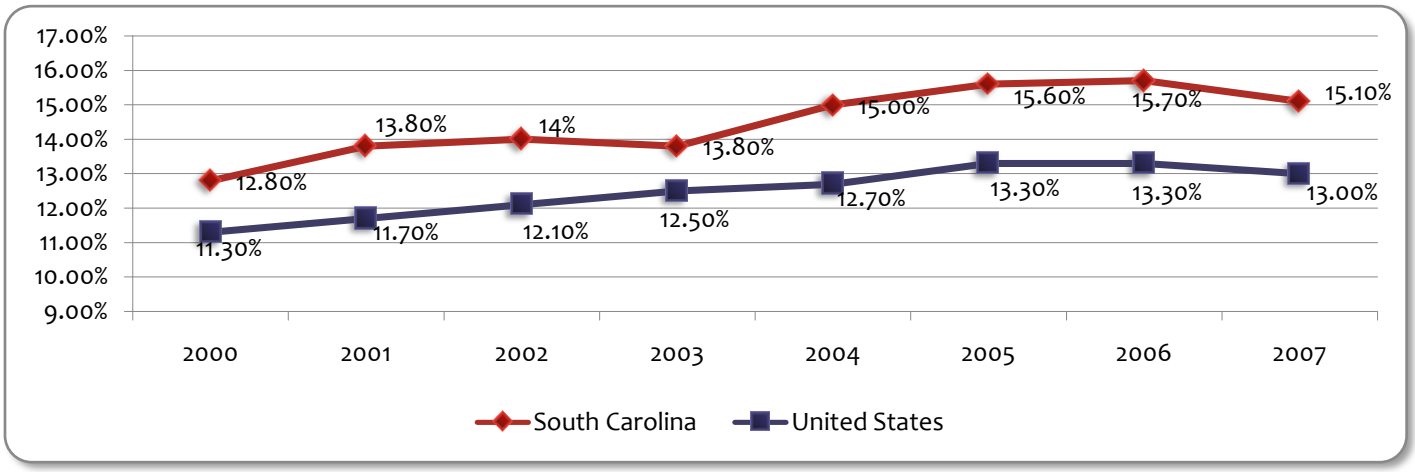
	Commute Time 2000	Commute Time 2007	Percent Change
South Carolina	21.9 minutes	23.2 minutes	+5.9%
United States	24.4 minutes	25.3 minutes	+3.7%

Source: American Community Survey, US Census Bureau

[6] "Banking the 'Demographic Dividend:' How Population Dynamics Can Affect Economic Growth" *RAND Program Policy Brief.*

Community Indicator: Poverty

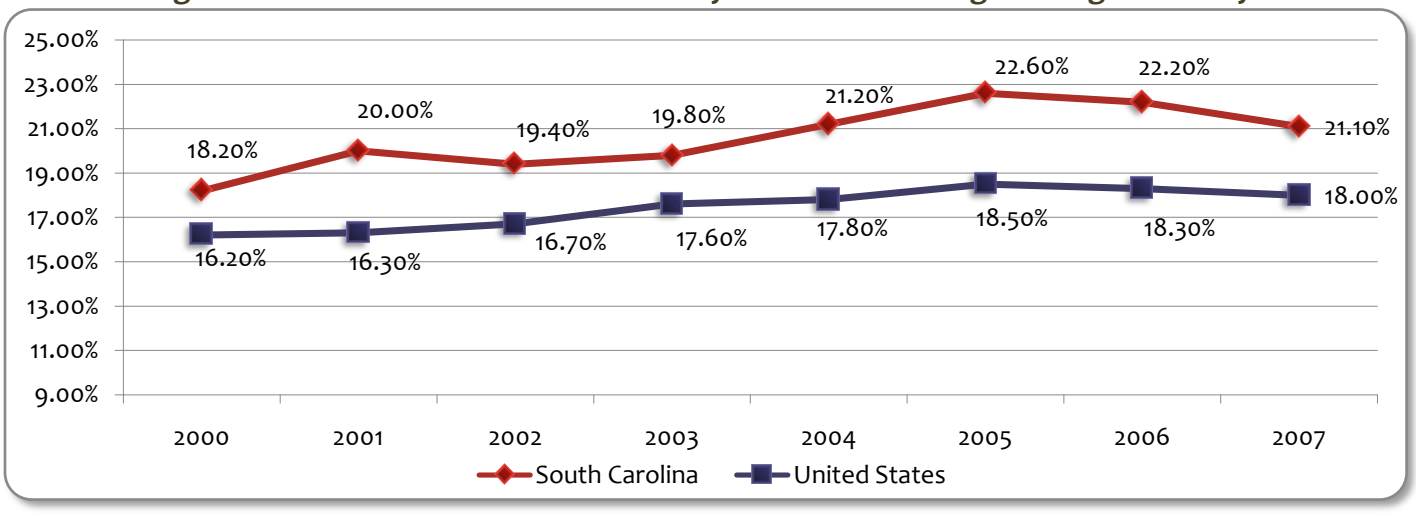
Figure 2.5 Percent of Population Living in Poverty



Source: American Community Survey, US Census Bureau

Poverty is an important community measure because of the consequential effects of living in poverty. Poverty is often found in conjunction with other negative social factors such as high crime rates and increased reliance on social welfare.[7] Poverty rates in South Carolina have remained persistently higher than the national rate (Figure 2.5). Again 2003-04 marked a significant year in this metric, precipitating one of the sharpest year to year increases in poverty in the state after decreasing in 2002-03. This contrasts with the nation where poverty has risen year-to-year, however at much slower and more constant rate. A highlight within this metric for both the nation and the state is that 2006-2007 saw poverty once again decline. Within these numbers, the percent of children living in poverty has fared better. After peaking in 2005, both South Carolina and the nation have reduced the percentage of children living in poverty in both 2006 and 2007 (Figure 2.6).

Figure 2.6 Percent of Related Children 18 years old and Younger Living in Poverty

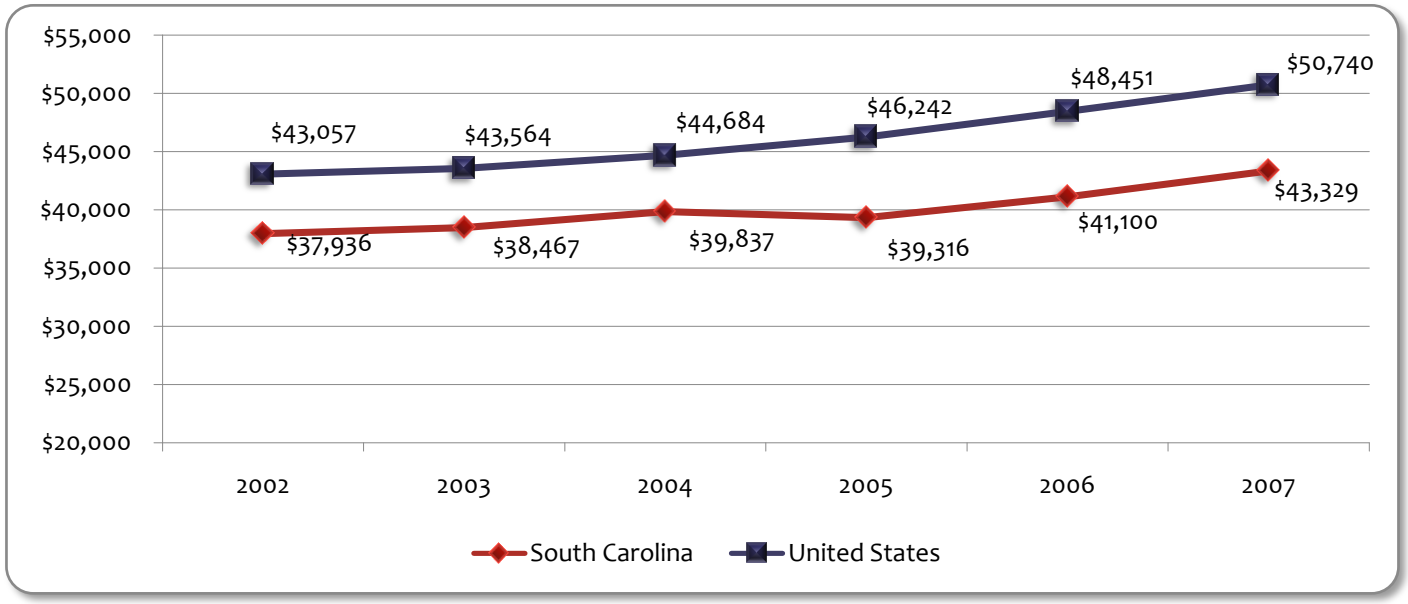


Source: US Census Bureau

[7] Ziona Austrian, Iryna Lendel, and Afia Yamoah, "An Update of the Regional Growth Model for Large and Mid-Size US Metropolitan Areas: Northeast Ohio Dashboard Indicators," (Center for Economic Development, Cleveland State University, August 2007), page vi.

Household Income and Home Ownership

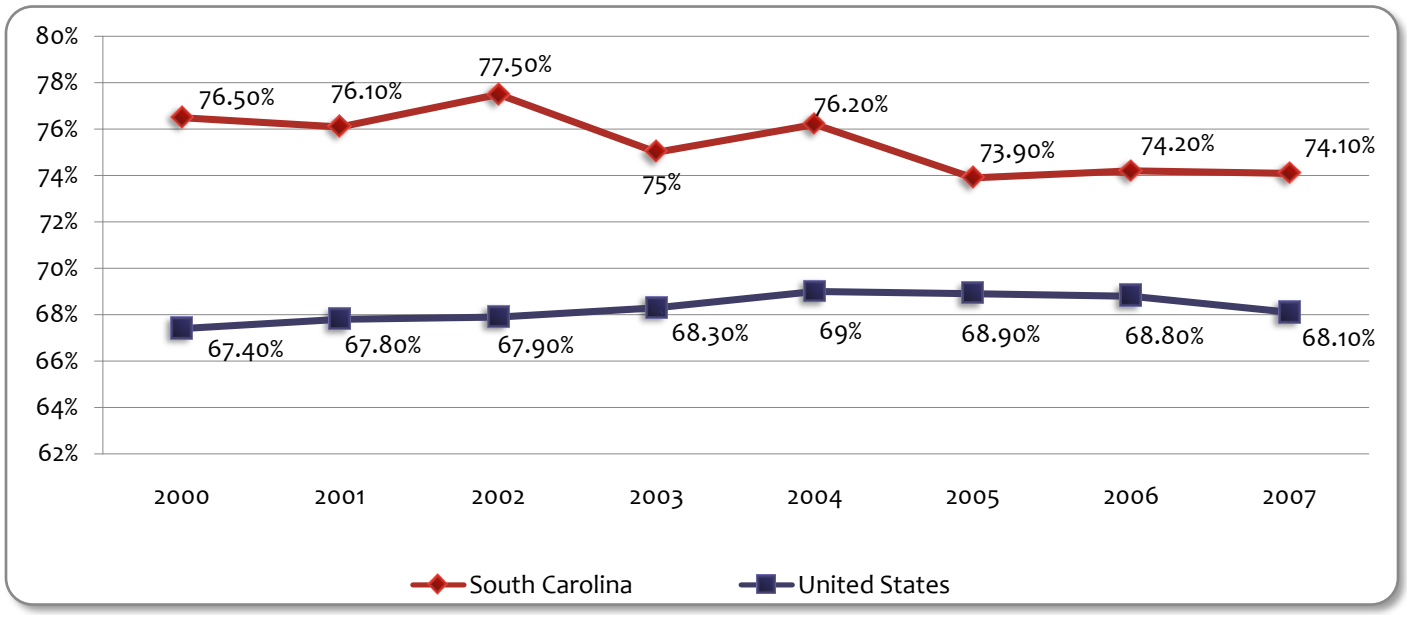
Figure 2.7 Median Household Income (dollars)



Source: American Community Survey, US Census Bureau

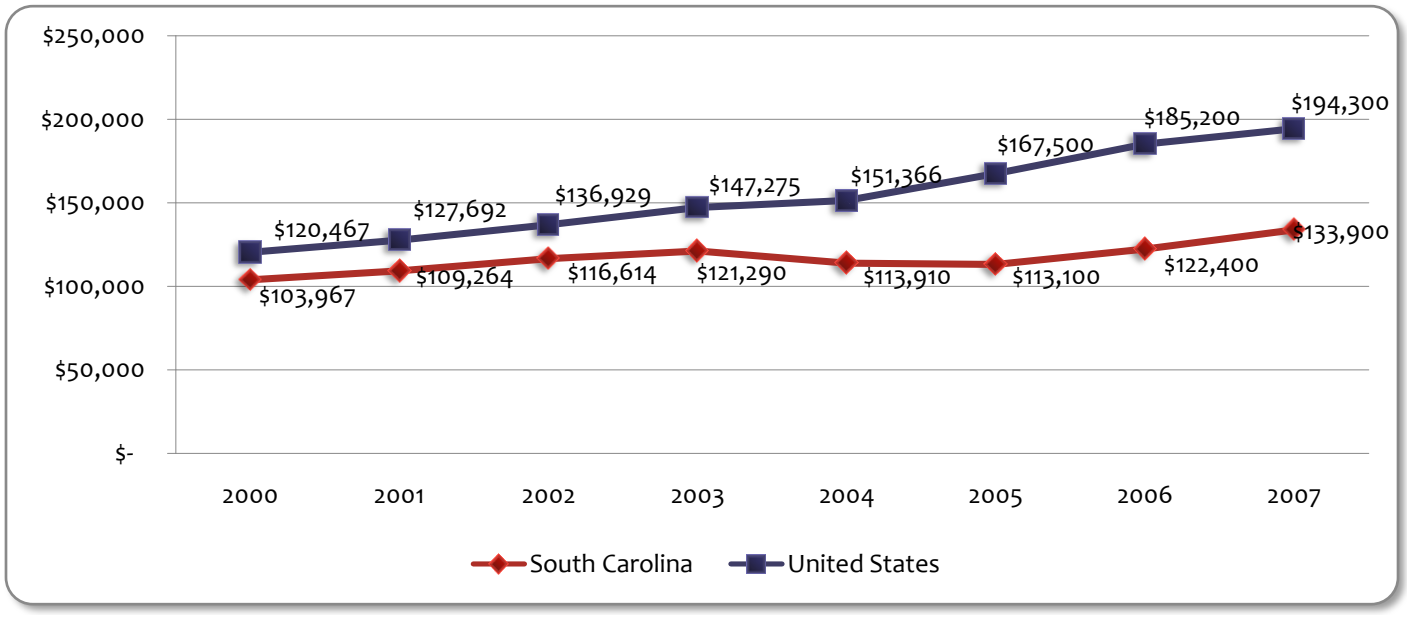
Household (median) incomes in the state have consistently lagged the nation, representing a mixed-bag of both rises and declines (Figure 2.7). Despite these lower incomes, homeownership rates in the state are higher than the nation (Figure 2.8 and 2.9). The homeownership rate of 74.1% in South Carolina was significantly greater than the national average of 68.1% in 2007. Overall, rates peaked nationally in 2004 (compared to 2002 in South Carolina) and both have experienced gradual declines since. Homeownership has not been shown to be correlated with growth in either per capita income or per capita GDP.

Figure 2.8 Homeownership Rates



Source: US Census Bureau

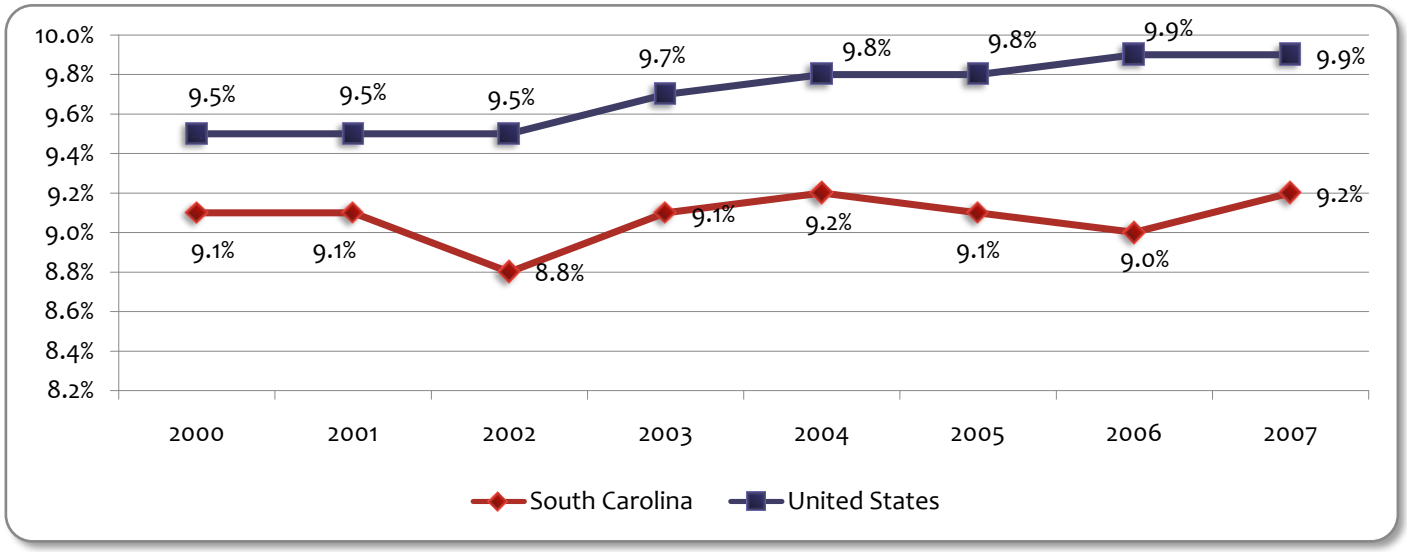
Figure 2.9 Median Home Value



Source: US Census Bureau

Lower home values, as well as South Carolina's lower costs of living and lower tax burdens, are all attractive features of the state compared to national averages, particularly for workers. South Carolina consistently scores well in the business tax climate index produced by the Tax Foundation, also making it an attractive place for businesses. Tax burdens on businesses have significant implications for job creation and retention, plant location, competitiveness, and the long-term health of a state's economy. According to the Tax Foundation, "a state with lower tax costs will be more attractive to business investment, and more likely to experience economic growth."[8] In addition to a more favorable business tax climate, the state also enjoys a lower tax burden on the state's citizens, as a percent of their total income, than the national average (Figure 2.10).

Figure 2.10 Percent of Income Paid as State and Local Taxes

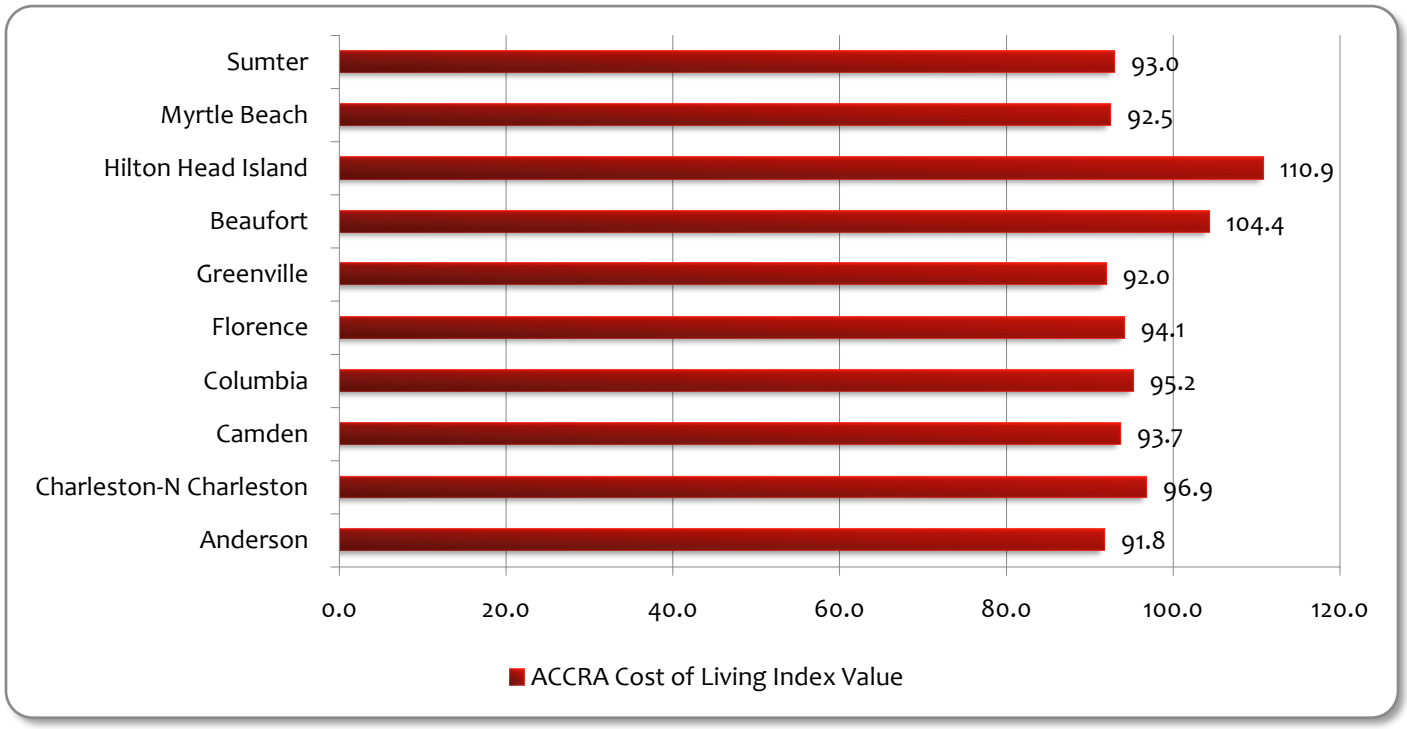


Source: Tax Foundation

[8] Tax Foundation State Business Tax Climate Index, Fiscal Year 2009 pg. 2.

Additionally, the cost of living in eight out of the 10 metropolitan regions in South Carolina as assessed by the Council for Community and Economic Research in its 2008 ACCRA Cost of Living Index is below the national metropolitan average. Despite lower incomes, the cost of everyday living expenses—from housing to utilities to food—is cheaper than the average in other national metros.

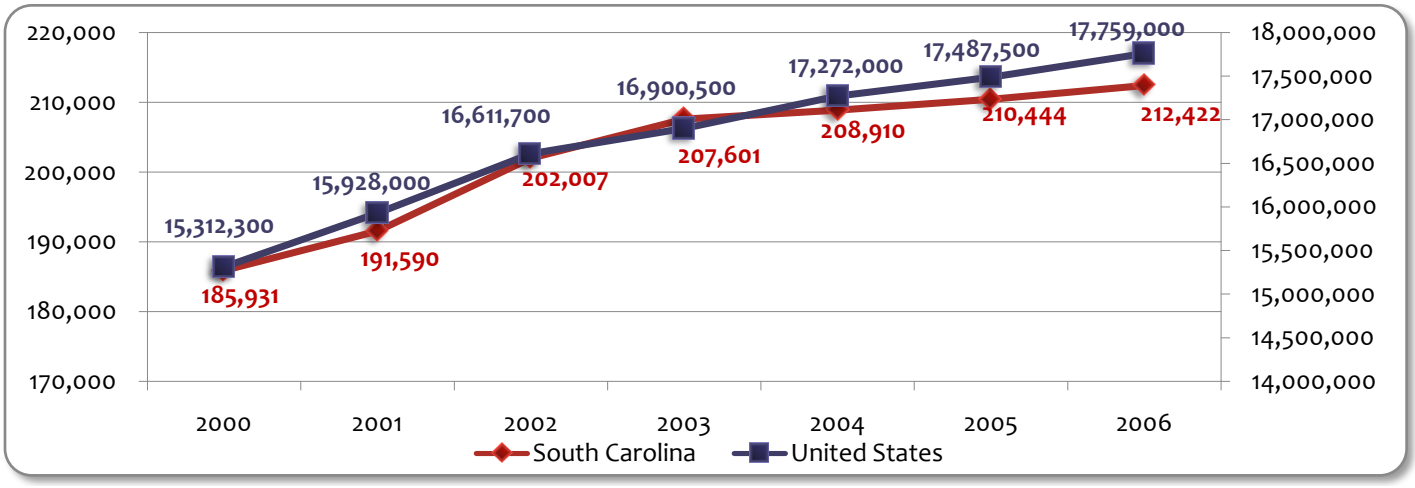
Figure 2.11 Average Cost of Living for South Carolina Metro Areas, 2008
(Average for all selected US metros equals 100)



Source: 2008 Annual Average Data, ACCRA Cost of Living Index

Education

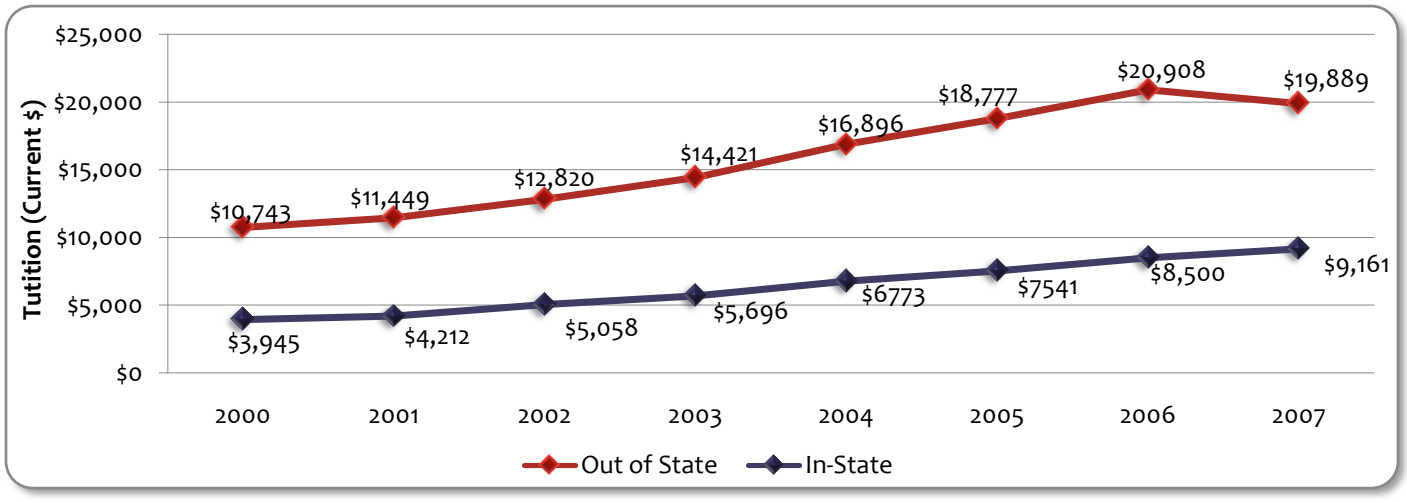
Figure 2.12 Enrollments at Degree-Granting Institutions, South Carolina



Source: National Center for Education Statistics: Digest of Education Statistics, 2008

Education also plays a vital role in many aspects of economic growth and quality of life, from reducing poverty and crime rates, to attracting high-tech industries, to promoting and developing innovation. Education is a pivotal means by which a state can capitalize on the potential benefits of growth in the working age population. Proper education of this age group can lead to increased productivity, increased employment, and ultimately increased per capita income (less poverty). Therefore, investment in education at all levels must be a priority. While full-time enrollment in South Carolina's research institutions continues to grow (Figure 2.12), large increases in in-state tuition may hinder the ability of South Carolinians to attend college (Figure 2.13) and find employment in high-paying jobs. According to the RAND report, "a larger, better-educated workforce will yield benefits only if the extra additional workers can find jobs." Thus it is vital to continue to attract and create job opportunities in the state to take advantage of highly skilled workers as well as to keep well educated, productive citizens from migrating to another state with better job prospects.

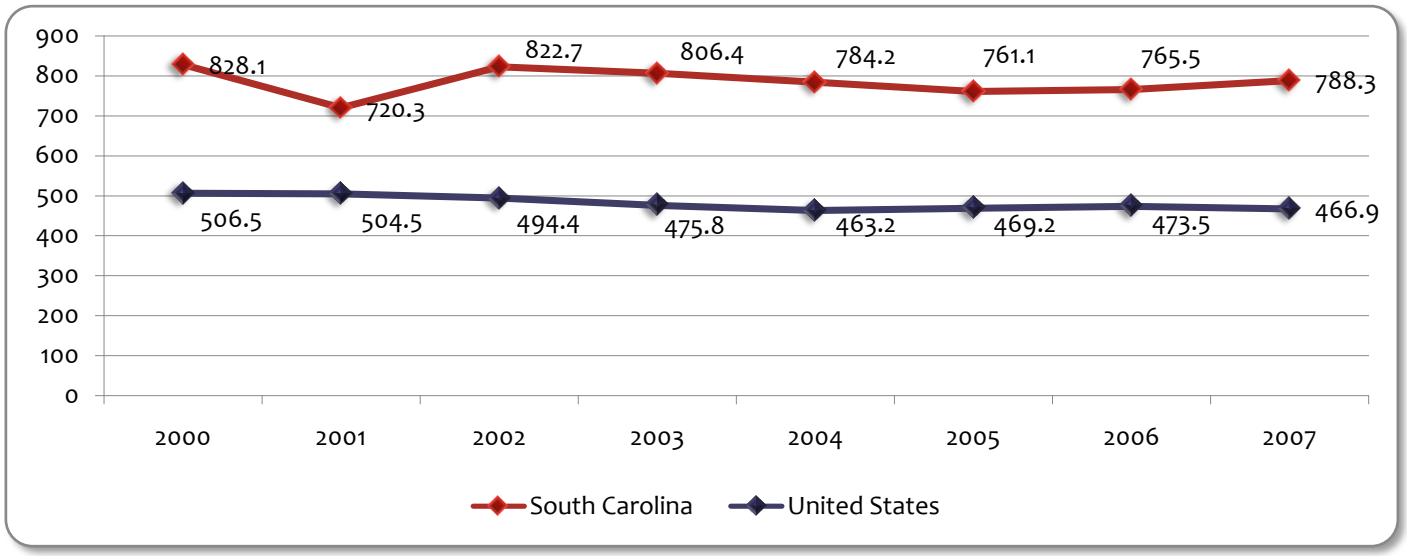
Figure 2.13 Average Tuition at Research Institutions, South Carolina



Source: South Carolina Commission on Higher Education, 2008 Statistical Abstract

Community Indicator: Crime

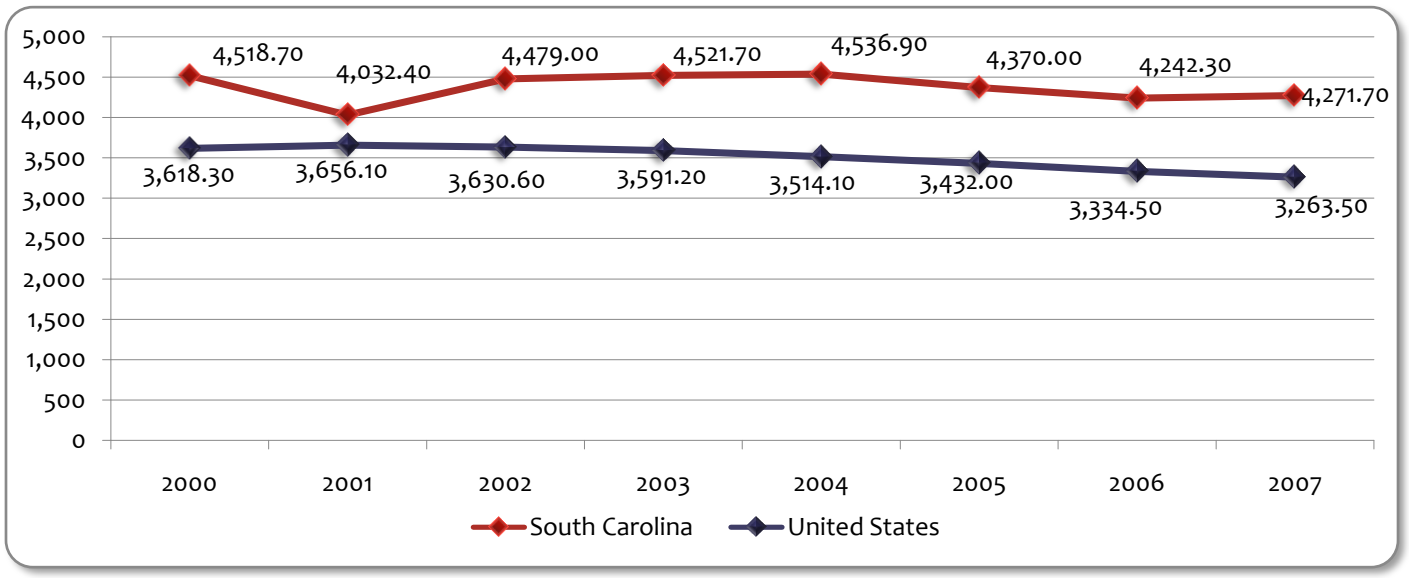
Figure 2.14 Violent Crime Rate (crimes per 100,000 people)



Source: Bureau of Justice Statistics, US Department of Justice

Violent and property crimes in South Carolina continued to be above the national average in 2007, as they have been since 2000. Violent crimes in 2007 increased over 2006 levels to 788 per 100,000 inhabitants (Figure 2.14). Property crimes also inched up in 2007 to 4,272 per 100,000 inhabitants (Figure 2.15). Despite violent crime rates and property crime rates falling nationally in 2007 compared to 2006, both actually rose in South Carolina. This contributed negatively to the Community Index value for South Carolina, adding to the declining value for 2006-2007.

Figure 2.15 Property Crime Rate (crimes per 100,000 people)



Source: Bureau of Justice Statistics, US Department of Justice

In 2007 South Carolina had the highest violent crime rate in the nation (Table 2.16). Crime can degrade the quality of life for citizens of the state and also deter businesses from establishing operations within the area. According to the

World Bank Investment Climate Survey, crime ranks sixth of 14 factors which firms see as severe or major obstacles to a firm's growth and operations.[9] Crime and unemployment can combine to create a cycle where poverty and unemployment spur crime, predicating poorer economic development, which again contributes to higher poverty and unemployment rates.

Table 2.16 Violent Crimes, South Carolina 2007

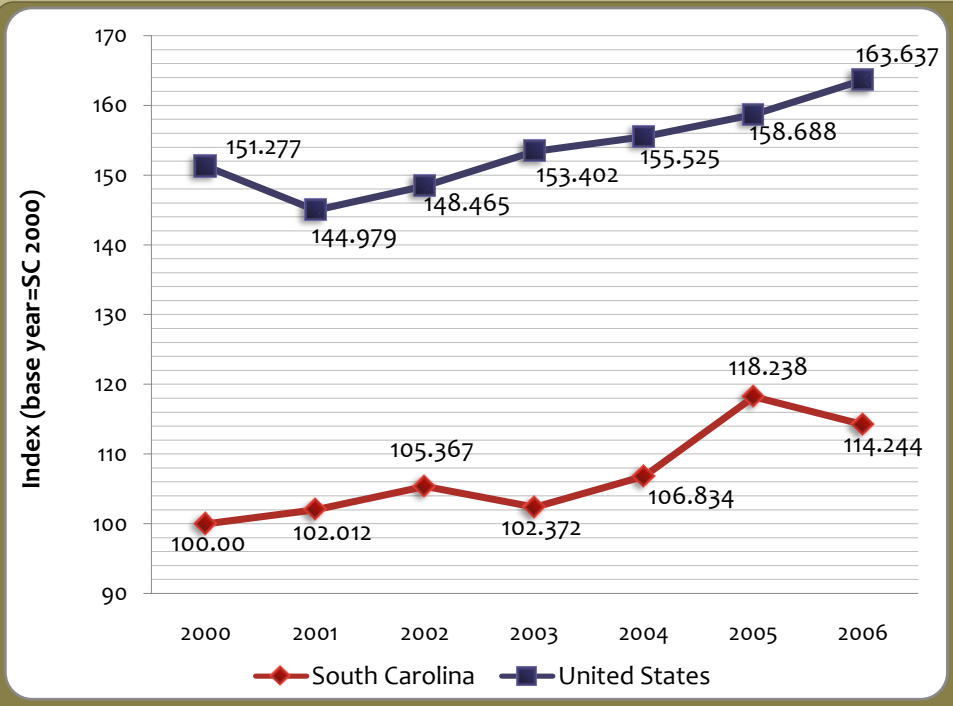
Type of Crime	Number Committed
Murder and Non-negligent Manslaughter	352
Forcible rape	1,739
Robbery	6,346
Aggravated Assault	26,309
Violent Crimes (Total)	**34,746**

Source: FBI Uniform Crime Reports, 2007

Policies effective at combating unemployment should also be effective in lowering the crime and poverty rates currently being experienced by South Carolina, and improve overall measures of community development. Areas where South Carolina falls behind the national average, including higher crime rates and poverty levels, can be contributed, in part, to the lower income levels and higher unemployment rates in the state. Improving job opportunities and educational opportunities in South Carolina can help to improve outcomes in both of these measures.

[9] World Bank Investment Climate Survey Hallward-Driemeier and Stewart, 2004.

South Carolina Key Performance Indicators: Innovation



Innovation Composite Index

South Carolina versus the United States

South Carolina has consistently trailed the nation in measures of innovation, with the gap between the state and the nation actually widening in 2006. South Carolina fell behind the nation in a number of areas, including industry investment in research and development and the percent of people with a Bachelor's degree. One area where the state has excelled in is attracting foreign direct investment.

Key Findings

Research and Development (R&D) as a % of GDP, 2000-2006

Industry investment in research and development in South Carolina increased by 62% during this time, compared to national levels which increased by 7.3%. However, current state investments in research and development still remain 49% below national levels.

Per Capita Foreign Direct Investment (FDI), 2000-2006

Foreign direct investments in South Carolina declined by 0.6% during 2000-2006, compared with the United States rate which increased by 13.2%. Also during this timeframe, investment levels fluctuated greatly, with 2006 state FDI just returning to the 2000 levels. South Carolina's FDI is 23% higher than national levels.

Percent of Population 25+ with a Bachelor's Degree, 2000-2006

The number of people in South Carolina with at least a Bachelor's degree declined by 2.6% from 2000-2006, compared with the United States which increased its share by 8%. The 2005-2006 percentage declined much steeper than the nation's.

Index Components

Research and Development as a Percentage of GDP, 2006:

South Carolina: 0.0112% (decreased by 17.5% from 2005)

United States: 0.22% (increased by 6.2% from 2005)

Per Capita Foreign Direct Investment, 2006:

South Carolina: $5,841 (increased by 8.8% from 2005)

United States: $4,731 (increased by 6.1% from 2005)

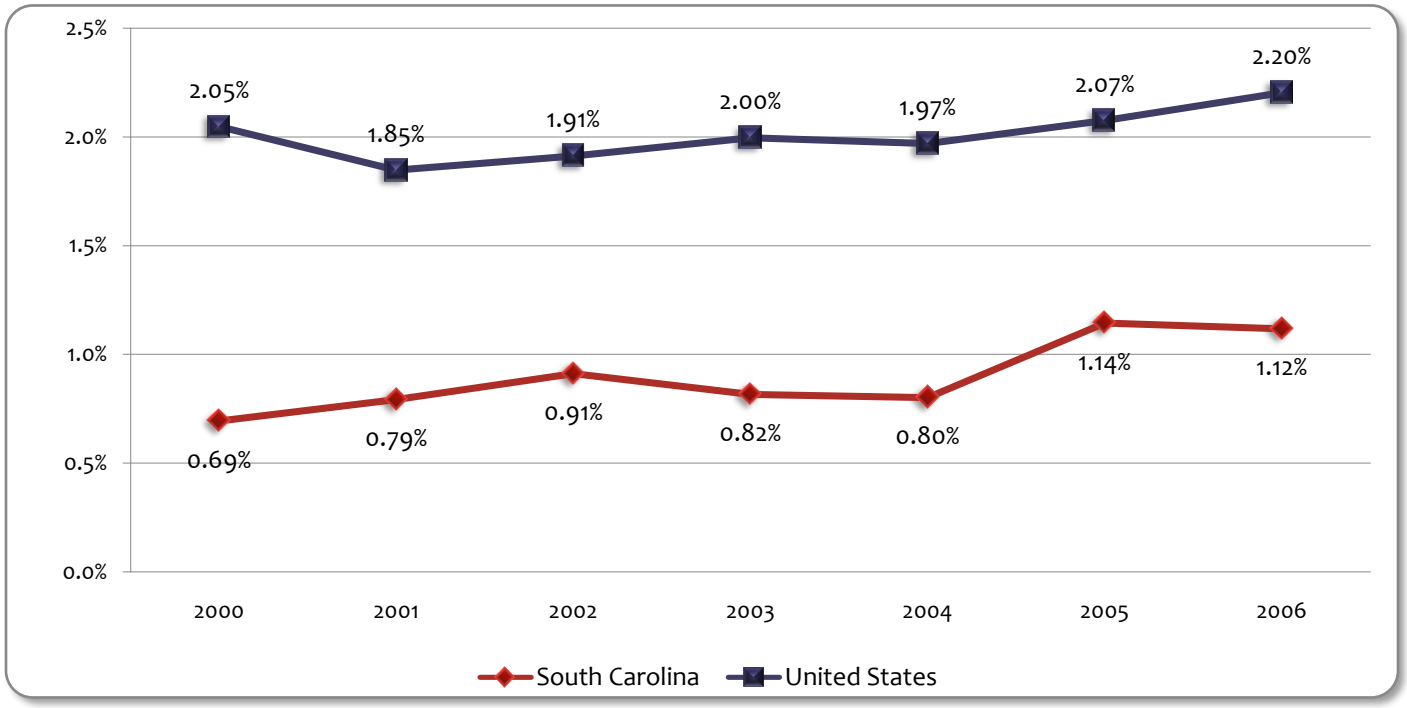
Percent of Population 25+ with a Bachelor's Degree, 2006:

South Carolina: 22.6% (decreased by 6.6% from 2005)

United States: 27.0% (decreased by 0.73% from 2005)

Innovation Indicator: Industry Research and Development

Figure 3.1 Industry Research and Development as a Percentage of GDP ($millions)



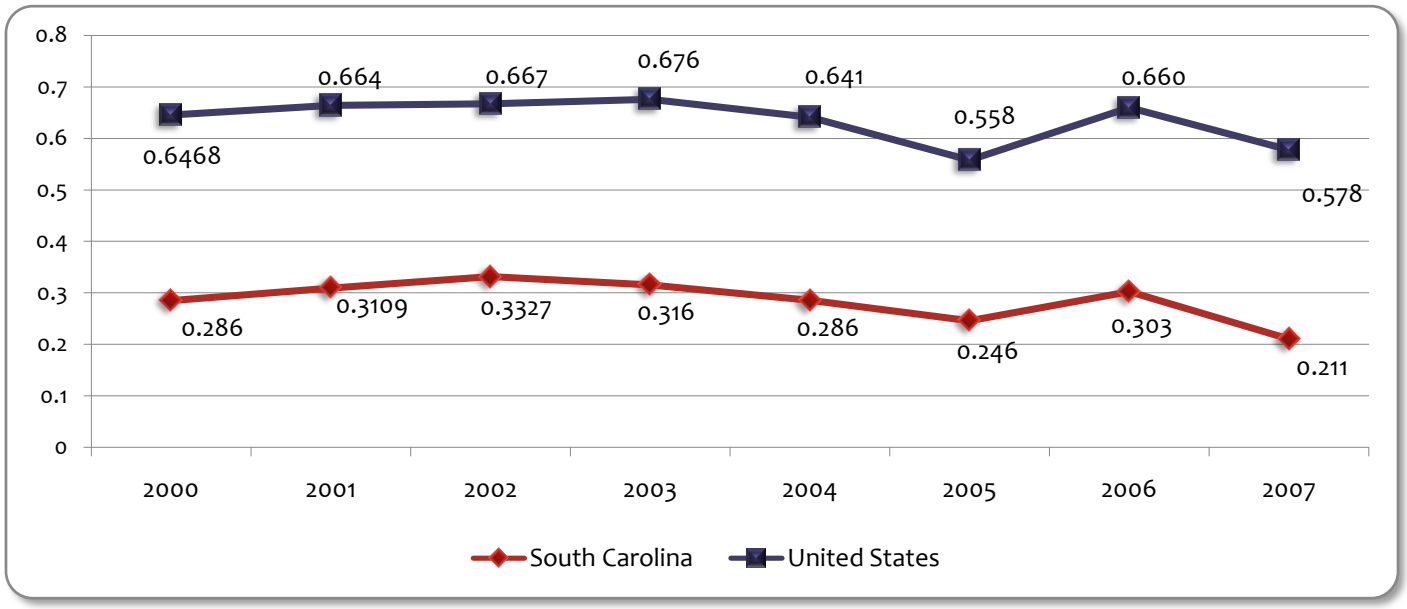
Source: National Science Foundation, Division of Science Resources Statistics

According to the 2007 State New Economy Index, businesses provide just under two-thirds of all research and development funding.[10] Businesses chose to invest in research as a means of increasing their competitive advantage through the development of new products and innovations, making industry investment in R&D a key factor in spurring and driving economic growth. Levels of industry investment in R&D in South Carolina have not kept pace with national levels; the current national average is nearly double that of South Carolina's (Figure 3.1). However, South Carolina has shown marked improvement in its levels of investment since 2004, and percentage wise has outgrown the nation during this time.

Levels of investment in research and development are also related to the number of patents and other entrepreneurial activities in an area. Businesses and entrepreneurs conduct R&D activities to develop new products to improve their market advantage and promote further innovation. Patents are one such indicator of an area's ability to innovate. According to a study conducted by the Federal Reserve Bank of Cleveland, patents are a key driver for increasing a state's per capita income growth over the last 50 years.[11] The number of patents issued in South Carolina has been consistently below the national average and has generally followed the same progression as that of the nation. Both experienced a dip in activity in 2005 and again in 2007 (Figure 3.2).

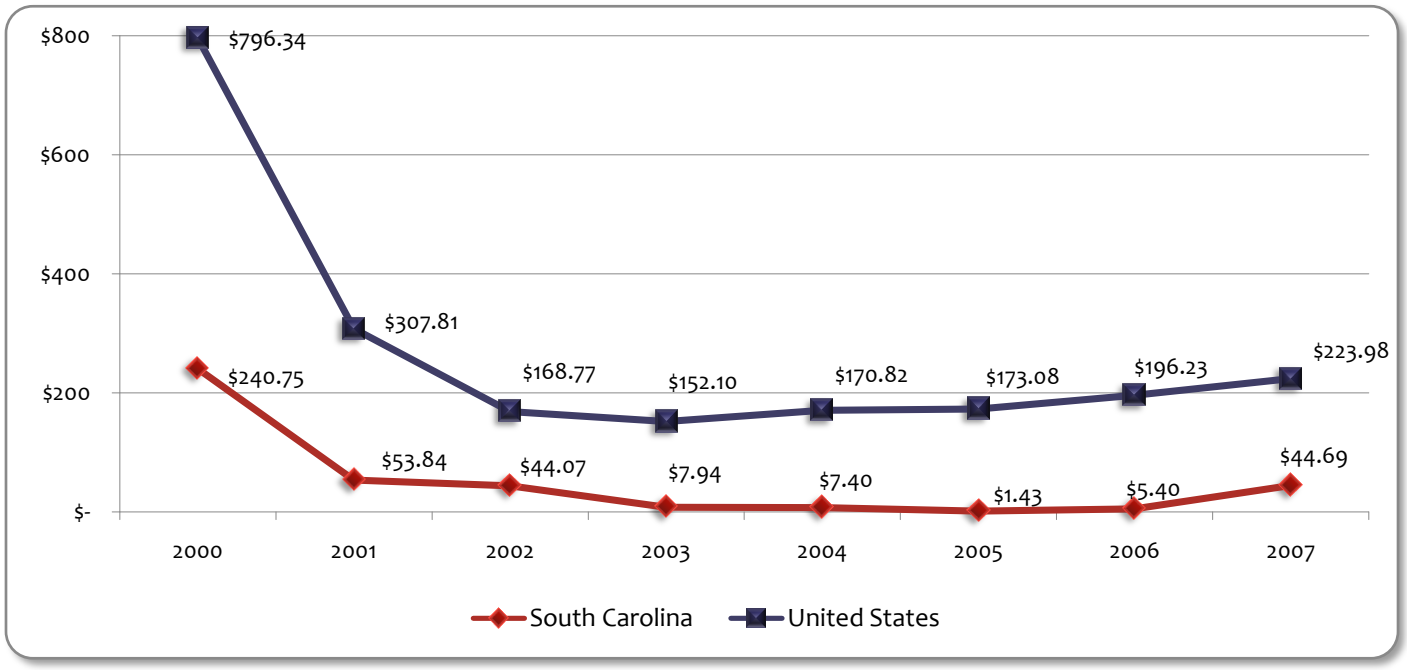
[10] Robert D. Atkinson and Daniel K. Correa "The 2007 State New Economy Index,"(The Information Technology and Innovation Foundation, Kauffman Institute, February 2007).
[11] Paul Bauer, Mark Schweiter, and Scott Shane. "State Growth Empirics: The Long-Run Determinants of State Income Growth," (Federal Reserve Bank of Cleveland, May 2006).

Figure 3.2 Patents Issued to Companies or Individuals per 1,000 Workers



Source: US Patents and Trademark Office and Current Employment Statistics, Bureau of Labor Statistics

Figure 3.3 Venture Capital Investments (total dollars per worker)

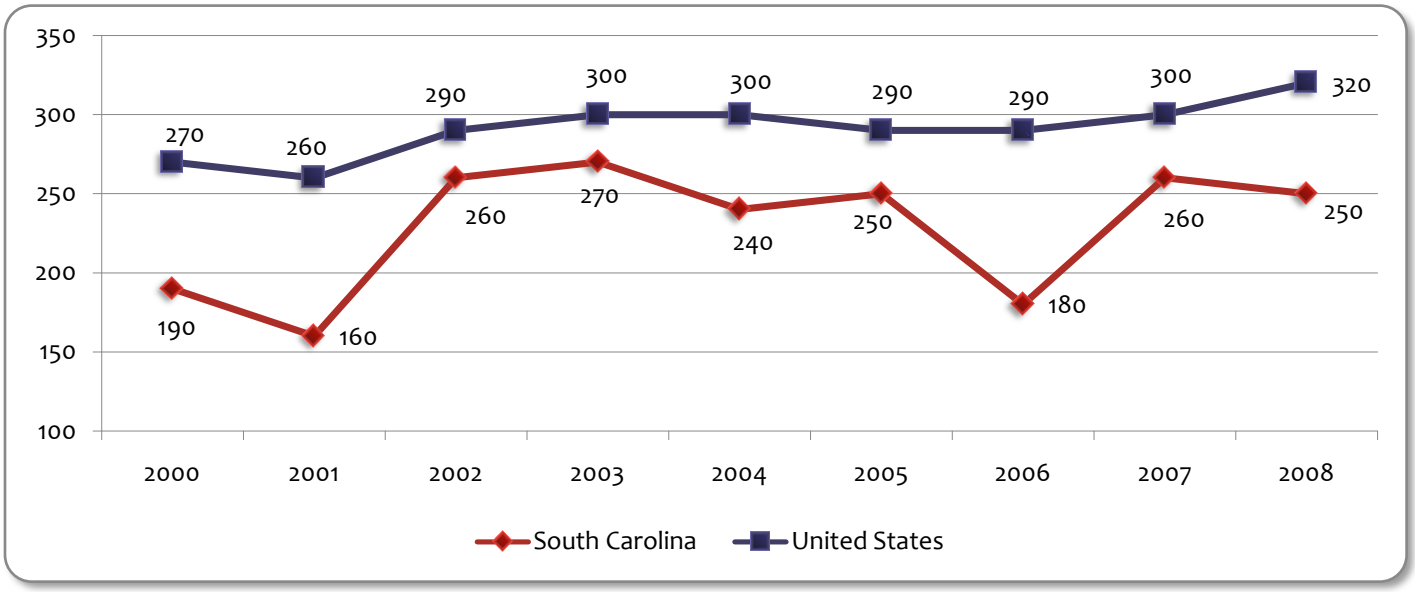


Source: PricewaterhouseCoopers/National Venture Capital Association MoneyTree™ Report and Current Employment Statistics, Bureau of Labor Statistics

Patents are important because they embody the process of innovation and are manifestations of the role of knowledge in promoting economic growth. Similarly, venture capital investments serve as a gauge for a region's ability to adapt to the changing dynamics of the New Economy. Venture capital (VC) represents investors' demonstrable belief in the potential transformation of R&D and innovation into marketable products. South Carolina's VC investments have also followed the same progression as that of the United States, reflecting a dramatic dip during the recession of 2001, and bottoming out in 2005 (Figure 3.3). A significant uptick in VC investment occurred in 2006-2007, growing dramatically by 728% during this time.

Another vital link in the chain of developing economic growth through knowledge and innovation is entrepreneurship. Entrepreneurship is vital because it represents the translation of knowledge into businesses and jobs. Entrepreneurs become the conduit through which knowledge, research, and innovation are translated into commercial entities, embodying the very tangible process of often intangible research and development efforts. The Kauffman Index of Entrepreneurial Activity quantifies this idea, measuring "the rate of business creation at the individual owner level."[12] South Carolina has trailed the United States in levels of entrepreneurship in the past, with far greater and more frequent fluctuations in the number of entrepreneur in a given year (Figure 3.4). A significant gap opened between the state and nation for entrepreneurial levels in 2006; however, by 2007, South Carolina narrowed that divide. The state significantly improved its entrepreneurial numbers in 2007, only to see them dip again slightly in 2008, contrasting a rise in entrepreneurial activity in the nation.

Figure 3.4 Entrepreneurs per 100,000 People



Source: Kauffman Index of Entrepreneurial Activity, as calculated by Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey

[12] Robert Fairlie, "Kauffman Index of Entrepreneurial Activity: 1996-2008," April 2009. http://www.kauffman.org/uploadedFiles/kiea_042709.pdf.

Business Churning

Related to the number of entrepreneurs in the state is the idea of business churning. Business churning measures the number of new companies created and the number of "deaths" of existing companies as a share of the total number of firms in the state. Churning has been shown to boost productivity and create new jobs, both of which can be drivers of innovation and growth. Churning is often used as an indication of entrepreneurial activity and the transition of an economy to new industries within a state. The Small Business Association (SBA) produces annual state rankings of business churning, and as of 2006, South Carolina ranked 28th, up slightly over 2005 (Table 3.5).

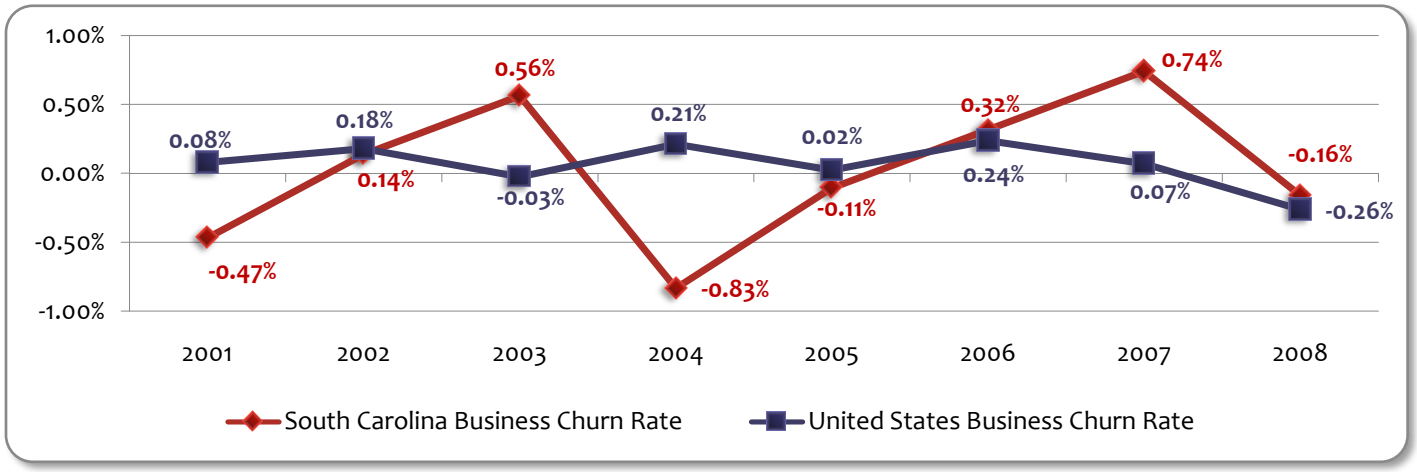
Table 3.5 SBA's Business Churning Rankings, South Carolina 2000-2006

Year	State Rank
2000	25
2001	17
2002	32
2003	31
2004	28
2005	30
2006	28

Source: Small Business Association, State Business Churning Rankings, 2000-2006

Churning rates can be calculated using data from the Business Employment Dynamics series from the BLS. South Carolina's business churning has fared better than the nation's in the past two years. Figure 3.6 represents business churning rates for the state and the nation, calculated as net private business creation (business openings minus business closings) as a percentage of total private establishments. Those years with a positive value represent more business creation than destruction, and the higher the churn rate, the more net businesses created in that year. South Carolina's churn rates have displayed more volatility than the nation's, bottoming out in 2003-2004, the same timeframe as several of the aforementioned economic metrics, further illustrating the complex interplay of individual metrics captured in this report.

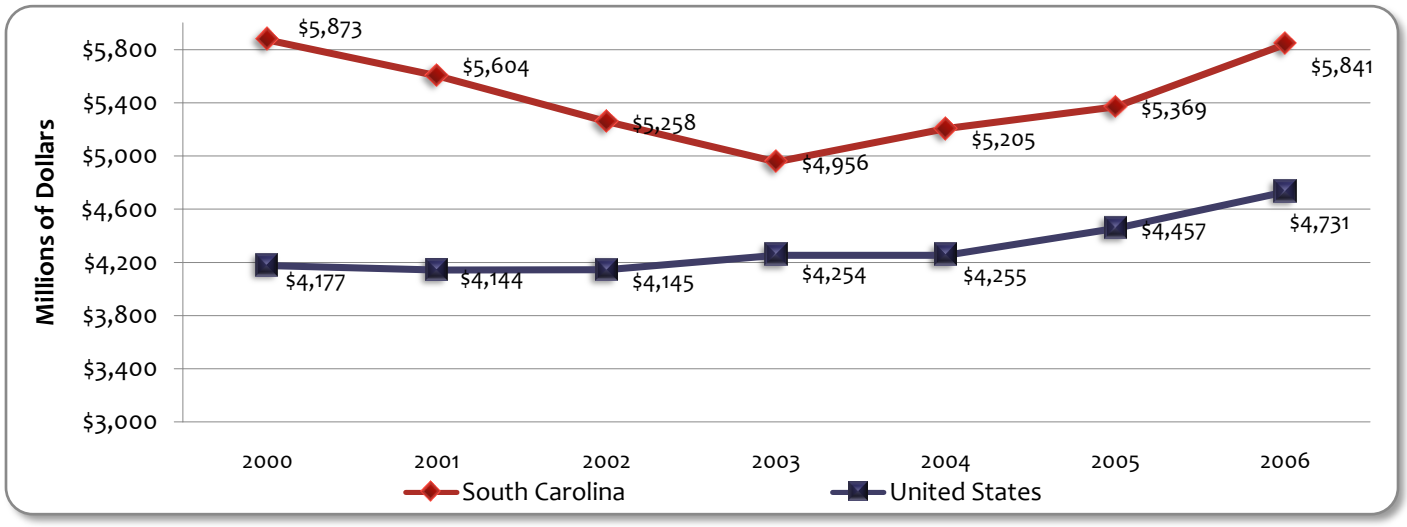
Figure 3.6 Business Churning Rates, 2001-2008



Source: Total Private Establishments Opening (Seasonally Adjusted), Business Employment Dynamics, Bureau of Labor Statistics

Innovation Indicator: Foreign Direct Investment

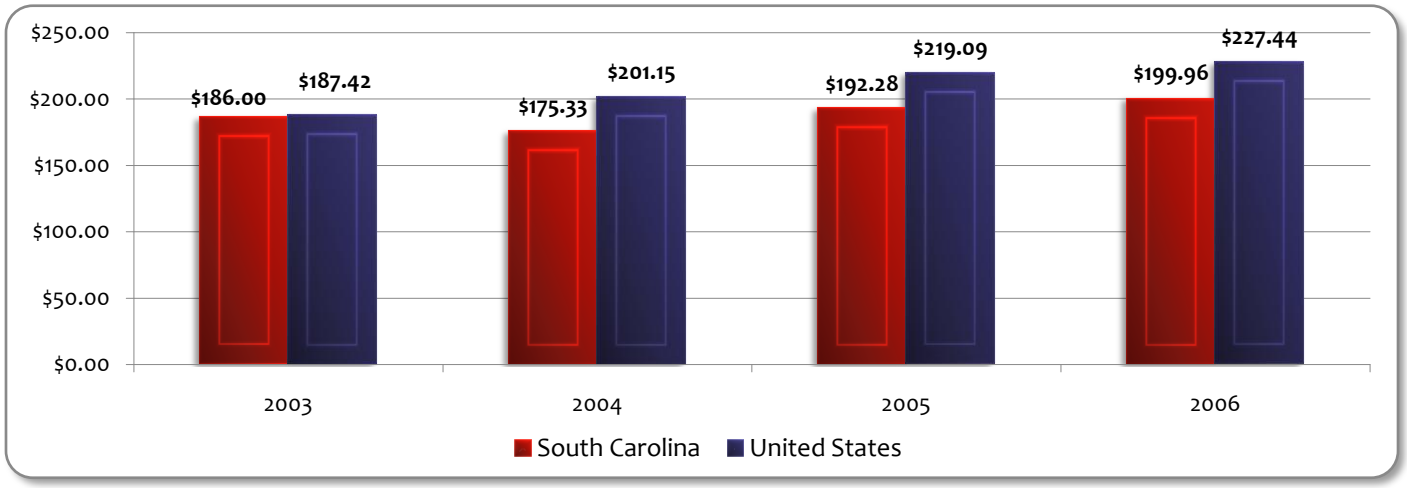
Figure 3.7 Value of Foreign Direct Investment per Capita



Source: Bureau of Economic Analysis, Survey of Current Business, August 2007 and Foreign Direct Investment in the United States, Operations of US Affiliates of Foreign Companies

South Carolina has performed strongly in attracting foreign direct investment (FDI) into the state (Figure 3.7). This measure is important as incoming FDI creates new jobs in an area, while also investing in the local facilities, enabling an area to widen its economic base.[13] The recession of 2001 had a dramatic effect on FDI in South Carolina, especially when compared to national levels which remained generally flat during this time. FDI contracted by 15.6% in 2001-2003, compared with national levels which shrank by just 1.84%. However, since 2004 FDI in South Carolina increased year-over-year, with FDI per capita in South Carolina returning to the pre-recessionary rates in 2006. Although the nation has outpaced South Carolina in terms of FDI per capita growth rates in 2000-2006, state level FDI remains significantly higher than national levels.

Figure 3.8 Value Added per Production Worker

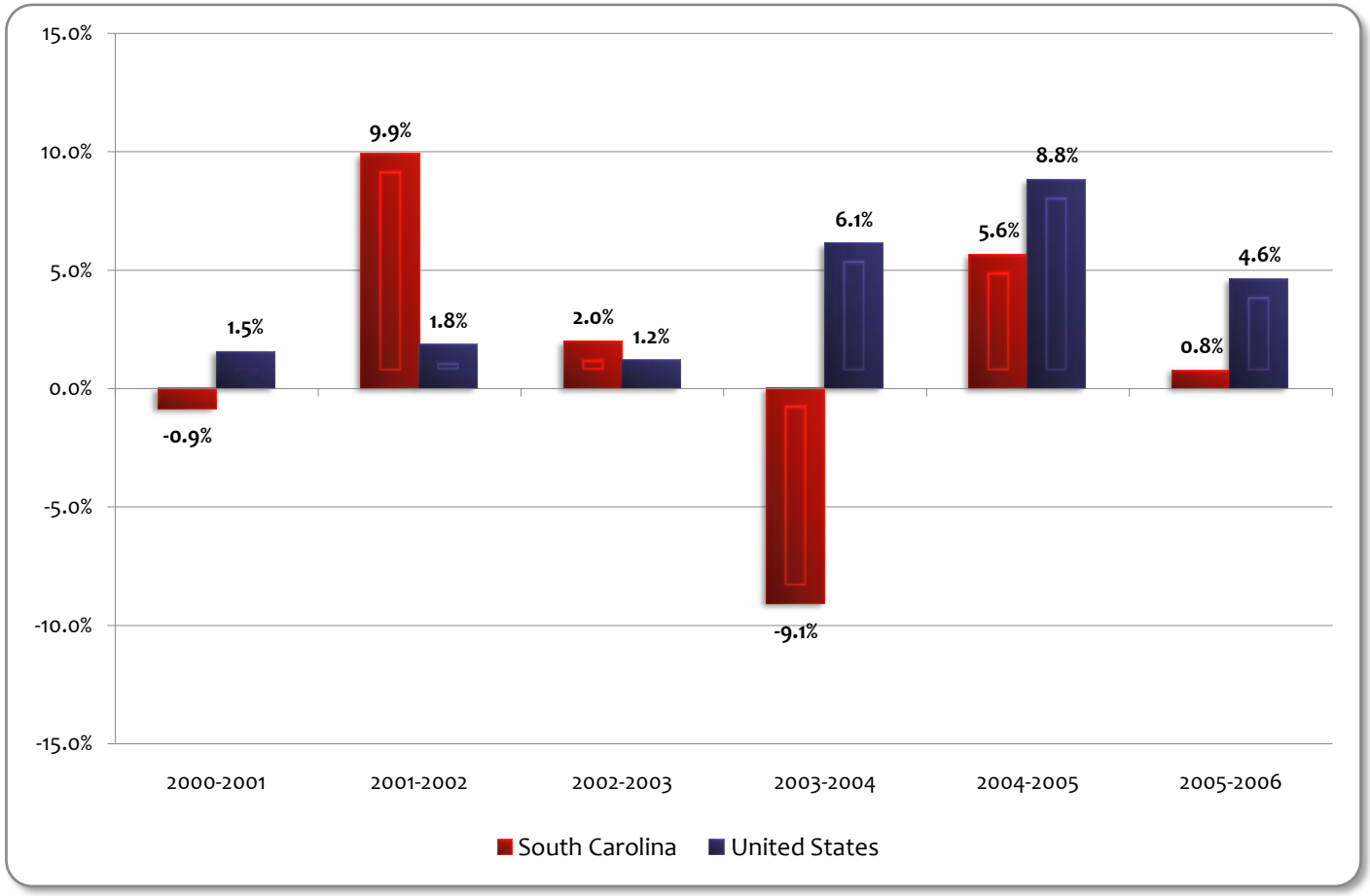


Source: Annual Survey of Manufacturers: 2000-2006, US Census

[13] Atkinson and Correa.

FDI is important because it allows businesses to further integrate into the world economy, ensuring an ever expanding worldwide marketplace for a business's goods and services. Global investments also ensure better and quicker access to markets, talent, and technology to improve a company's bottom line. Value-added measures are one such indication of this increasing push towards productivity and innovation. According to the Kauffman Institute, "value-added is the difference in value between inputs into the production process (e.g., materials, energy) and the value of the final products or services sold."[14] More specifically, high-tech, high skilled manufacturing value-added sectors are important as they generally produce more complex products and require more capital-intensive, skilled workers. These two factors generally equate to increased value per hour worked as well as higher wages for the workers.[15] Despite declining numbers of people employed in manufacturing, South Carolina has increased its value-added per production worker since 2004 (Figure 3.8 and 3.9).

Figure 3.9 Percent Change in Manufacturing Value-Added

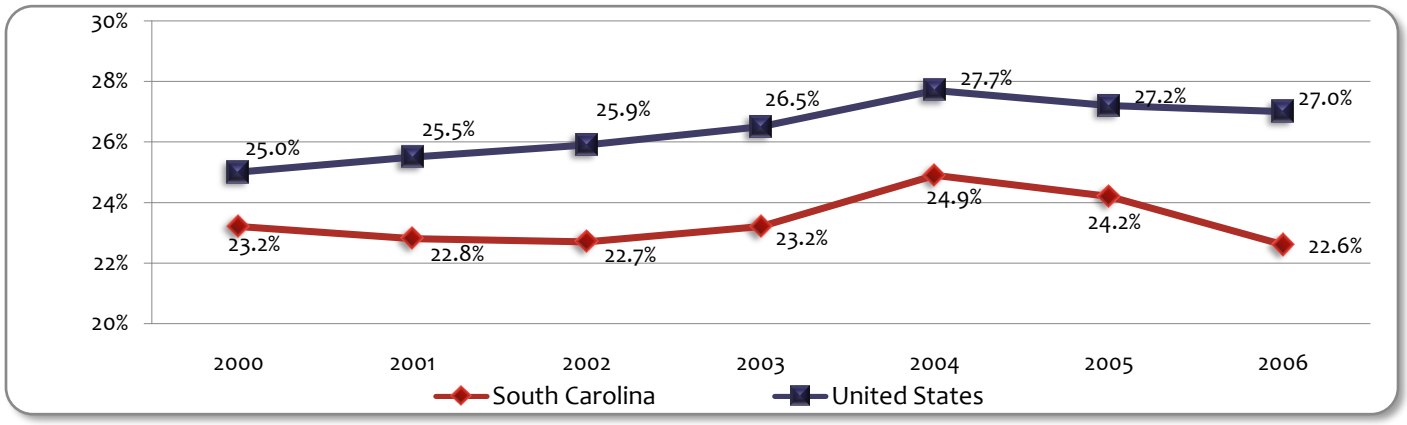


Source: Annual Survey of Manufacturers: 2000-2006, US Census

[14] ibid.
[15] ibid.

Innovation Indicator: Educational Attainment

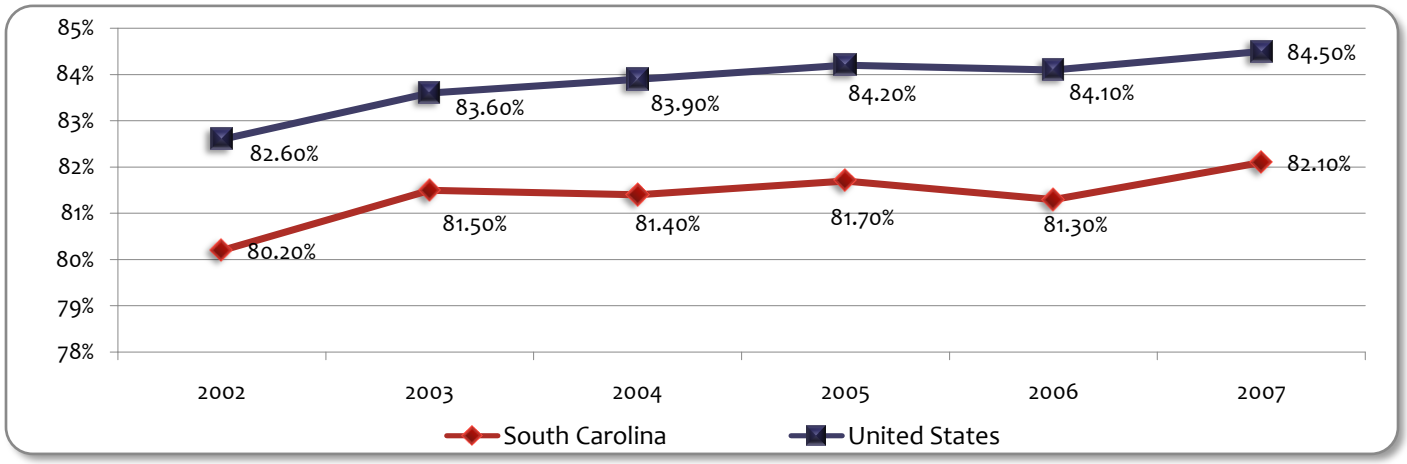
Figure 3.10 Percent of Population 25+ with a Bachelor's Degree or Higher



Source: American Community Survey, US Census

Educational attainment signals the potential quality of a region's workforce. Furthermore, educational levels have been shown to be critical for increasing a region's ability to promote innovation as well as raise productivity.[16] High educational standards are inextricably linked with high-level occupations which indelibly affect income. South Carolina's population has typically had a lower percentage of people with at least a Bachelor's degree than the nation (Figure 3.10). However, in 2006, while national numbers remained relatively flat in terms of growth, South Carolina's percentage took a noticeable dip, weighing negatively on Innovation index value for South Carolina and contributing to a widening gap between the state and the nation. Furthermore, South Carolina has also trailed the nation in the percent of its population graduating from high school. Similar to the number of people with Bachelor's degrees, the graduation rate took a noticeable dip in 2005 and 2006. It subsequently picked up again in 2007 (Figure 3.11). This increase in percentage terms between 2006 and 2007 was sharper in South Carolina than the nation, leading to more people than ever before graduating from high school in South Carolina.

Figure 3.11 High School Graduates or Higher (percent of population 25 years and over)

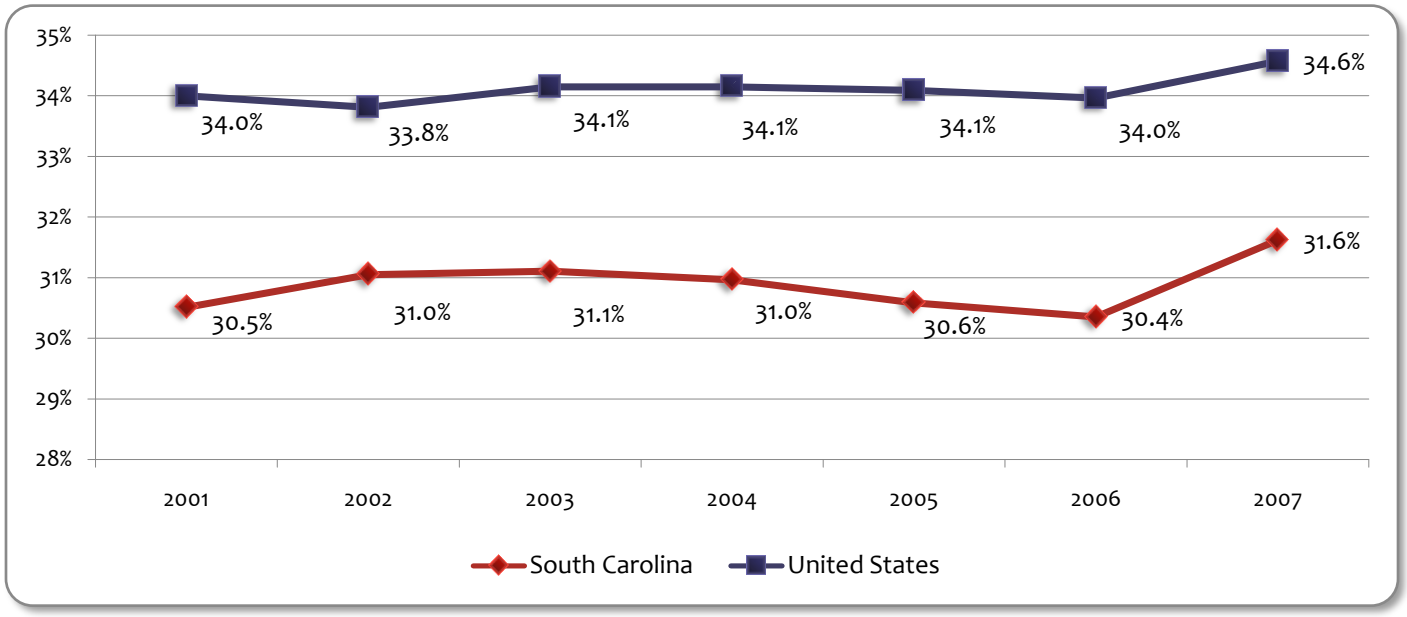


Source: American Community Survey, US Census

[16] ibid.

Educational attainments are also a direct indicator of the types of jobs available in an area. Regions that can attract and sustain a more educated workforce tend to also have higher concentrations of people with high educational attainment, making this demonstrably linked with highly skilled jobs.[17] This tenet is reflected in the occupational composition of South Carolina and the nation. Just as South Carolina lagged the nation in its percent of population with Bachelor's degrees, it too lags in the percent of workers employed in management, professional and related occupations (Figure 3.12). The percentages for the United States remained relatively flat from 2001-2006 and took a noticable uptick in 2007. South Carolina's progression has been similarly smooth and flat, as the numbers of people employed in management, professional, and related occupations rose only a tenth of one percent during 2001-2006. In 2007 however, the number increased by 1.2%, double the amount of growth experienced by the nation, which increased by 0.6%.

Figure 3.12 Percent of Workers Employed in Management, Professional and Related Occupations



Source: American Community Survey, US Census

[17] ibid.

Conclusion

This report examined a combination of elements which contribute to economic development—the economy, the community, and innovation. Each sub-index, and its component metrics, revealed areas of strength and weakness, and most encouragingly, that many of these indicators are interconnected. Improvement in one area will have positive, spillover benefits in others. For example, attracting a larger number of high paying jobs will have the benefit of not only increasing economic output, but also of raising personal per capita income, lowering poverty and crime rates, and increasing the percentage of the population with higher levels of education. Understanding the consequences and inter-relatedness of these indicators is an excellent starting point for making improvements that will bring the state's performance more in line with national averages. Conclusions and potential policy implications can be drawn from each of the sub-indices below.

Economy: Quality versus Quantity

While the Economic Indicators show overall improvement and growth in the state, the key finding of this section is the dichotomy between rising employment and a growing labor pool, yet larger than average growth in unemployment and stagnant per capita GDP growth. An overarching theme that emerged was the quantitative and qualitative effects of employment, with the Economic Index demonstrating how it is not an isolated metric. Instead, employment and its associated occupational groupings is a highly influential indicator with serious implications for per capita income and gross domestic product.

While employment growth in the state has been strong, there are issues surrounding the type of employment (occupational classifications) growing in South Carolina. Low-wage, low-skill occupations tend to dominate the employment composition in the state. Furthermore, mediocre growth rates in these occupations easily outnumber stellar growth rates in high wage, high skilled jobs in terms of the actual volumes of jobs created. This has made employment growth somewhat of a double-edged sword: while on the one hand, more people than ever are working in the state, the quality of the occupations they are engaged in remains questionable. This caveat is crucial because occupation type has significant ramifications beyond sheer employment numbers. A worker's occupation determines the level of income he/she earns and is ultimately a reflection of the educational levels attained by said worker, as well as serves as a reflection of the types of jobs offered by the economy.

Employment also affects other economic indicators such as income and state GDP. Encouraging high skill, high pay occupations would not only increase employment, but would also work to raise PCPI and state level GDP. While a lower cost of living may mitigate some of the effects of earning lower wages than other workers in other states, this does not mask the full ramification of lower wages. The majority of South Carolina's workers earn lower wages because they are engaged in low skill, low wage occupations. Furthermore, growth in these low wage occupations have contributed negatively to raising per capita GDP levels. Thus, the Economic Index highlighted the full interplay amongst an array of quantitative measures and emphasizes the need to assess the quality of jobs created in South Carolina due to their capacity to influence such factors as income and poverty.

Communities: Bringing it All Home

The community metrics for South Carolina during 2000-2007 show areas of strength and areas for improvement. Communities and the quality of life they engender are vital tools for South Carolina's current and future economic

development. While the state is experiencing growth in key demographic areas and has a lower cost of living compared to other states, these factors alone will not ensure economic growth and prosperity. Population growth, particularly those of working age, requires providing jobs for these individuals. Failure to provide jobs to capitalize on this segment of the population will mean greater migration of potentially productive members of the workforce to other areas. The wider implications of such workforce migration—lower educational attainment, lower savings rates, and greater dependence on social welfare systems—establishes the importance of this factor.

Creating quality communities is a key tenet for attracting and sustaining a quality workforce to promote economic development and eradicate negative social factors. Negative community factors, such as crime, also have far-reaching implications. South Carolina's crime rates for both violent and property crimes remain a key area of concern for the state, as both are consistently higher than the national average and have begun to increase slightly in recent years. These factors in conjunction with rising unemployment, declining per capita incomes (in relation to national growth rates), and rising poverty rates can blight a community. Thus, this interplay between unemployment, poverty, and crime gives hope that even a small improvement in one area will have a dramatic and positive impact on the others.

Innovation: Integrating the Past and the Future

It is no coincidence that states with higher concentrations of low and mid-tech manufacturing have below average per capita incomes, versus states with higher concentrations of high-skilled industries having higher per capita incomes.[18] This indicates that human capital, and all its associated activities, is becoming a key principle of economic growth and development. Innovation, as demonstrated by this report, is undeniably linked with economic performance, quality of life, and per capita incomes. However, for states such as South Carolina, with a large manufacturing base, how can these typically goods-producing economies transition to more knowledge-based industries? The key lies in the word transition. It would be unrealistic to expect that overnight states would and should abandon their manufacturing base to solely focus on knowledge industries. It is more a matter of how South Carolina can start the transition and integration of knowledge and innovation activities into its traditional economic base to spur economic growth.

Innovation—in the form of such principles as investment in research and development, workforce education, and entrepreneurship—are not mutually exclusive of manufacturing development. Traditionally, the two have been closely linked. According to Retooling for Growth, "manufacturing has historically accounted for some two-thirds of private sector expenditures on R&D. In this way and many others, manufacturing is deeply integrated in the discovery and innovation process that fuels long-run productivity and national wealth."[19] Focusing on innovation and knowledge does not require the abandonment of production, as these two ideas and processes are not mutually exclusive. It is about acknowledging the changing role of innovation; whereas previously it was ancillary to manufacturing growth, it has now become the driver.

Innovation is linked to manufacturing in two particular ways: enabling specialization and raising productivity. According to Luria and Rogers, "it follows that the starting point for almost any effort to increase regional wealth nearly always lies in or around specialization."[20] New or completely untested specializations will not necessarily drive

[18] Robert Weissbourd and Christopher Berry, "The Changing Dynamics of Urban America," (RW Ventures, CEOs for Cities, 20 March 2004).
[19] Daniel Luria and Joel Rogers, "Manufacturing, Regional Prosperity, and Public Policy," (Retooling for Growth: Building a 21st Century Economy in America's Older Industrial Area, Brookings Institution Press, 2008).
[20] ibid.

economic growth; rather focusing on improving and innovating within the confines of existing manufacturing strengths will help drive economic growth. South Carolina's large manufacturing base does not preclude it nor handicap it from participating in the New Economy. It can in fact be the basis from which the state can reassert its manufacturing prowess by focusing on innovation, which then in turn will have the subsequent effects of raising income levels and improving the quality of life for its citizens. Thus innovation, epitomized by specialization and productivity growth, becomes the basis for increasing incomes and propelling economic growth.[21] Moving beyond the old paradigm of seeing economic development as a linear process and the knowledge sector and the manufacturing sector as juxtaposed rather than interrelated is just the beginning.

Summary

There is much debate and scholarship written about the nature of economic development and the best means for promoting growth and prosperity in a region. Regardless of one's personal take on the validity of such arguments, vibrant communities and increasing innovation are undoubtedly becoming key factors in economic growth. Communities are not the exclusive tenet for promoting economic growth; rather it is the quality of life—low crime, less poverty, and a strong workforce—which is indelibly tied to economic growth. The same goes for innovation. It is not solely innovation in and of itself that is important, but the activities and processes associated with it—high educational levels, a keen business environment to promote investment, research and development—which makes it of growing importance to economic development.

Economic development is no longer solely about improving one aspect of the state. The evidence presented above shows that while South Carolina has improved over time in many areas associated with long-term economic growth, the state has been unable to successfully narrow the gap between it and the nation in a number of metrics. Economic growth today requires a concerted, holistic approach from policy makers to address deficiencies in a variety of areas such as education, high-paying job opportunities, and crime rates. South Carolina has the ability to take advantage of areas of strength such as a large, working age population and a strong history of foreign direct investment directly because of the interconnectivity of these metrics. Improvements made in any one area—the economy, the community, or innovation—has the potential to directly improve the performance of the others, and dramatically affect the long-term health of this state.

[21] Inter alia, see Vernon J. Henderson, "Externalities and Industrial Development," Journal of Urban Economics, no. 42 (1997): 449-79.

Appendix A: Selection of Indicators

Several possible indicators were given consideration for inclusion in each of the sub-indices. The three indicators selected for the economy index were based on measures widely used in the literature—(un)employment rate, per capita income, and per capita state GDP. Final selection of the indicators for the community and innovation sections was based on regression analysis using data from all 50 states and the District of Columbia. Variables that had a statistically significant impact on per capita personal income were chosen for inclusion (Table A.1). Some variables that were significant in the regression were not chosen for final inclusion in the index if they were strongly correlated with other measures in the index or if they lacked strong support in the literature of economic development.

The regression analysis was also used to generate weights for the innovation and community sections. The innovation section consisted of per capita FDI, the percent of the population with a Bachelor's degree, and R&D as a percentage of GDP. An increase of $1,000 per capita in FDI is associated with an increase in per capita income (PCI) of $166. An increase of 1% in the population with a Bachelor's degree is associated with an increase in PCI of $314. Finally, an increase of 1% in the percent of GDP devoted to R&D raises PCI by $724. Thus the final weights for the innovation index were 14% (166/1,204) for FDI, 26% (314/1,204) for the education variable, and 60% (724/1,204) for R&D.

A similar procedure was used to generate the weights for the community indicators. A 1% increase in the population aged 25-64 is associated with an increase in PCI of $303 (63%). An increase in the crime rate of 100 crimes per 100,000 inhabitants is associated with a decline in PCI of $99 (21%). Finally, an increase in the poverty rate of 1% is associated with a decline in PCI of $78 (16%). Although the poverty rate was not significant in the final regression, it is known to be directly related to income levels.

Equal weight (33%) was given to each of the indicators in the economy index.

Many of the indicators in this report are not available for more than a couple of years for South Carolina, so more rigorous analysis on only South Carolina data was not feasible at this time.

Table A.1 : Ordinary Least Squares Regression with Robust Clustered Standard Errors

Personal Income Per Capita	Coefficient	Robust Standard Error	p-value
Real State GDP per capita	0.140**	0.060	0.023
Percent Construction	8.247	9.245	0.377
Percent Manufacturing	-35.430	69.190	0.611
Percent Trade, Transportation, and Utilities	31.760	187.156	0.866
Percent Information	193.590	496.142	0.698
Percent Financial	-4.019	262.027	0.993
Percent Education and Health Care	-30.603	164.234	0.853
Percent Leisure and Hospitality	-139.079	103.747	0.186
Percent Government	0.158	1.315	0.905
Homeownership Rate	-207.250	136.221	0.134
Population 25-64	303.298***	112.955	0.01
Population 65+	616.017***	159.619	0
Percent Hispanic	72.846**	31.967	0.027
Percent African American	82.815**	32.020	0.013
Percent Asian	-0.589	42.861	0.989
Crime Rate	-0.990***	0.244	0
Poverty Rate	-77.692	93.312	0.409
Per Capita FDI	0.166***	0.035	0
Percent High School Graduate	121.093	102.824	0.244
Percent with Bachelor's Degree or more	314.001***	99.074	0.003
Entrepreneurship Index	-1025.934	2396.241	0.67
R&D as a percent of GDP	723.527***	226.728	0.002
Constant	-2595.215	14616.84	0.86
n=146	R^2=0.9204		
Significance levels indicated by * for 10%, **for 5%, and *** at 1%			