

# Higher Education Profiles & Trends

2012

**Tennessee Higher Education Commission**  
404 James Robertson Parkway, Suite 1900  
Nashville, TN 37243

# Tennessee Higher Education Profiles and Trends

Tennessee Higher Education Commission  
March 2012

## PURPOSE OF THIS REPORT

This report is in response to T.C.A. §49-7-202 (c) (7), which requires the Tennessee Higher Education Commission to “submit a biennial report to the governor and the general assembly, commenting upon major developments, trends, new policies, budgets and financial considerations which in the judgment of the commission will be useful to the governor and to the general assembly in planning for the sound and adequate development of the state’s program of public higher education.”

The purpose of this report is to provide state policymakers with a brief overview of Tennessee higher education within a regional and national context. This report presents data and analyses on five broad policy issues important to the state: 1) State context of higher education, 2) Student preparation, 3) Student participation, 4) Student progression, and 5) State higher education finance.

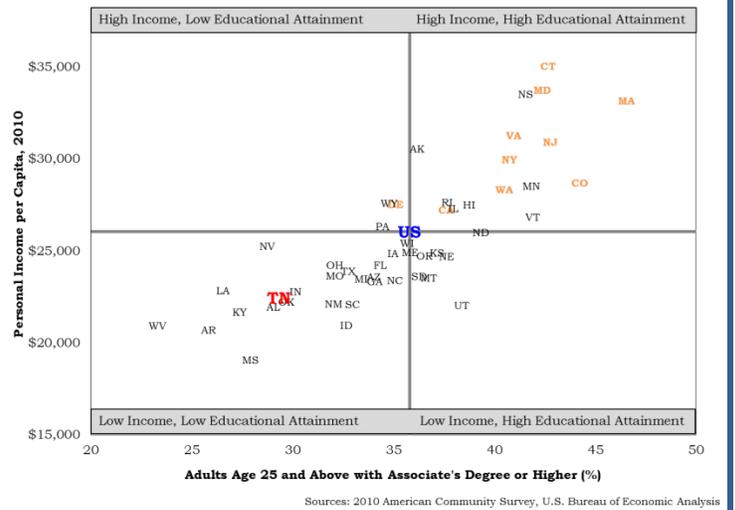
## EXECUTIVE SUMMARY

- Tennessee trails the U.S. and Southern Regional Education Board (SREB) averages in both college educational attainment and economic vitality. Distinct economic differences also exist across the state’s three Grand Divisions.
- Although Tennessee is a net importer of labor at all levels of educational attainment, most of the state’s in-migrants do not have college education.
- Tennessee’s population is increasing rapidly and growing relatively older. For the population age 18 and younger, the most salient demographic change is the growth in the number of people of Hispanic origin.
- Despite rising high school graduation rates, Tennessee’s educational pipeline productivity ranks low: Only 19 of 100 ninth-graders eventually graduate from college within 150 percent of normal degree time.
- Since the Tennessee Education Lottery Scholarship (TELS) program began in 2004, a greater percentage of Tennessee high school graduates are enrolling in in-state institutions.
- Adult student participation in the state is low, but it has started to increase across all institutional sectors.
- Minority students demonstrate lower retention and graduation rates than Caucasian students.
- Although Tennessee ranks third nationally in the amount of state grant aid per full-time equivalent student, less than a quarter of this grant aid is need based.
- Despite the growth in tuition and fees over the last two decades, higher education in Tennessee remains comparatively affordable in terms of the net cost of college relative to median family resources. Availability of TELS awards brings higher education within reach of more Tennessee residents.

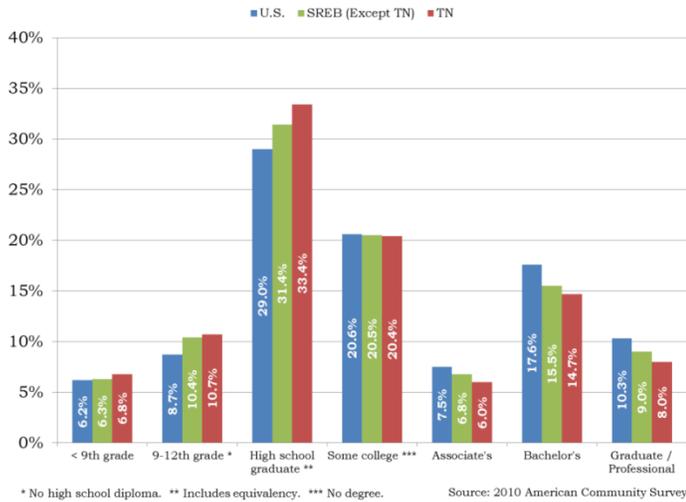
### 1. STATE CONTEXT OF HIGHER EDUCATION

Personal income and educational attainment are linked to a state’s economic competitiveness. In 2010, Tennessee’s per capita income was \$22,463, ranking 40<sup>th</sup> in the nation. Meanwhile, 29.3 percent of adult state residents had at least an associate’s degree, which ranked 43<sup>rd</sup> (Figure 1.1). The orange-lettered states in the upper right quadrant of the figure scored in the top ten on the *New Economy Index*, which measures the extent to which state economies are knowledge-based and globalized. In 2010, Tennessee ranked 41<sup>st</sup> in the *New Economy Index*.<sup>1</sup>

#### 1.1. Educational Attainment and Personal Income per Capita (2010)



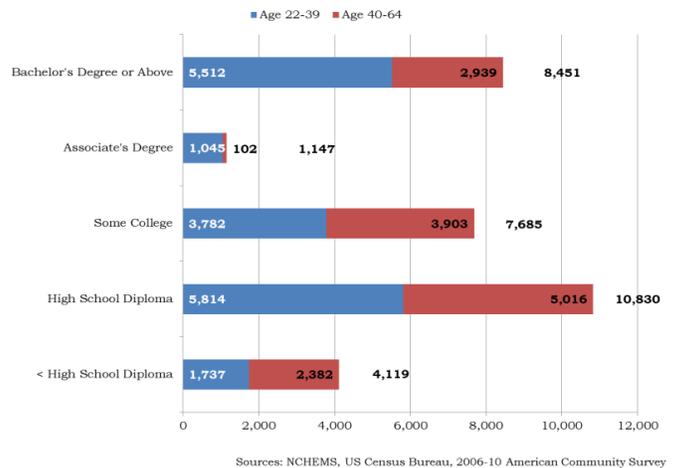
#### 1.2. Educational Attainment of Population 25 Years or Older U.S., SREB states, and Tennessee (2010)



Although Tennessee possesses comparatively large numbers of high school graduates, it is below the averages for the U.S. and Southern Regional Education Board (SREB) states in college educational attainment (Figure 1.2). In 2010, 17.5 percent of Tennessee’s adult population did not have a high school diploma and almost 54 percent of adults had completed either high school or some college. However, less than 29 percent of state citizens 25 years or older had any college degree.

Figure 1.3 demonstrates Tennessee’s success in attracting people from out of state with various levels of educational attainment. At all educational levels, the net migration of the adult population is positive. In 2010, Tennessee imported approximately 9,600 more working-age adults with an associate’s degree or higher than the same population that left the state. At the same time, many arriving workers do not have college education. In 2010, 70 percent of in-migrants arrived in Tennessee without a college degree.

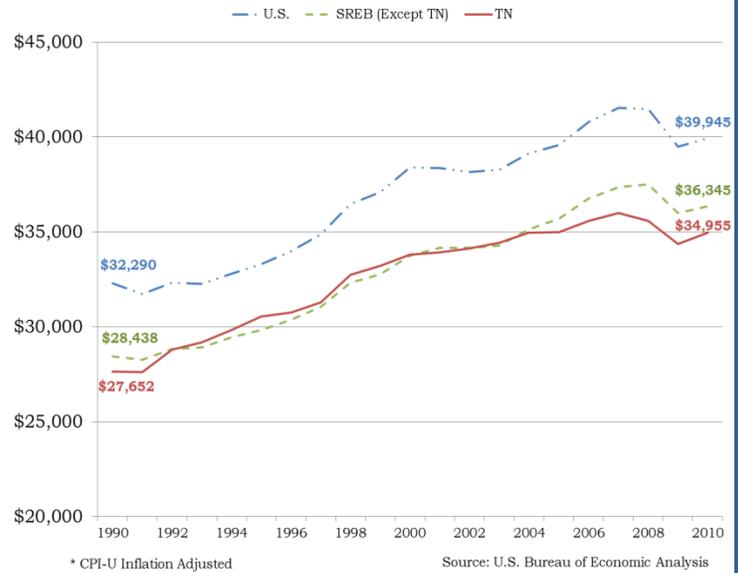
#### 1.3. Annual Net Migration to Tennessee by Age Group and Educational Attainment (2010)



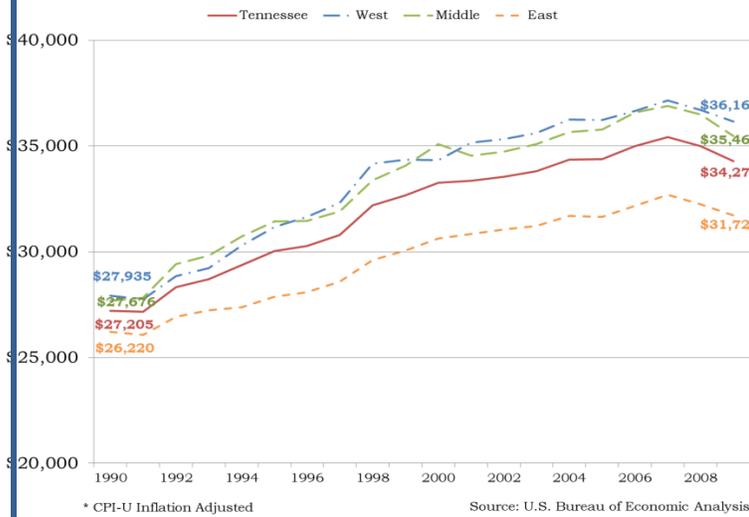
<sup>1</sup> The indicators of the New Economy Index are grouped under 5 categories: Knowledge Jobs, Globalization, Economic Dynamism, The Digital Economy, and Innovation Capacity. Source: [www.kauffman.org/research-and-policy/snei-interactive.aspx](http://www.kauffman.org/research-and-policy/snei-interactive.aspx)

The most commonly used indicators for states' economic climate are per capita income, unemployment rate, and poverty rate. **Figure 1.4** and the next several figures examine how Tennessee performs on these metrics. Trends in per capita personal income measure improvements in individuals' quality of life and reflect a state's ability to raise revenue. Adjusted for inflation, Tennessee's personal income per capita has increased steadily over the past 20 years, growing from 85.6 percent of the national average in 1990 to 87.5 percent in 2010. However, Tennessee remains below the national mean and has fallen behind the SREB average after eclipsing the SREB average in the 1990s.

1.4. Per Capita Personal Income in Constant 2010 dollars \*



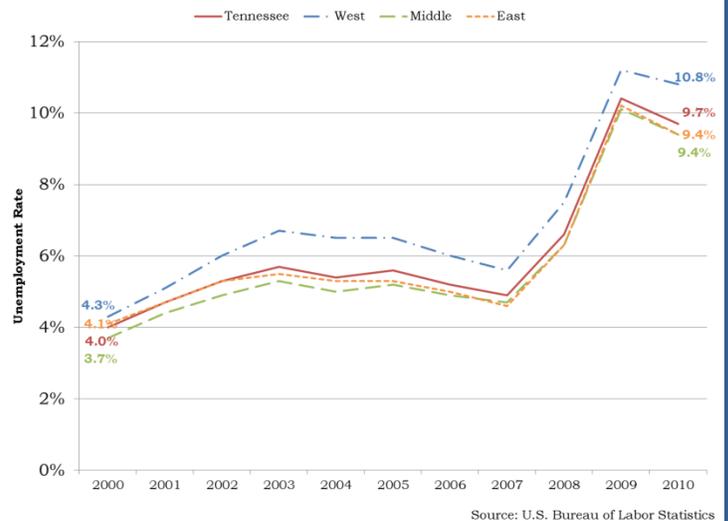
1.5. Per Capita Personal Income for Each of Tennessee's Grand Divisions in Constant 2009 dollars \*



In line with national, SREB, and Tennessee trends over the past 20 years, per capita personal income has been on the rise for all three Grand Divisions of the state (**Figure 1.5**). The relative positions of Tennessee's Grand Divisions have been consistent over time. The average for the Eastern counties of the state has been appreciably below the other regions and the average for the state.

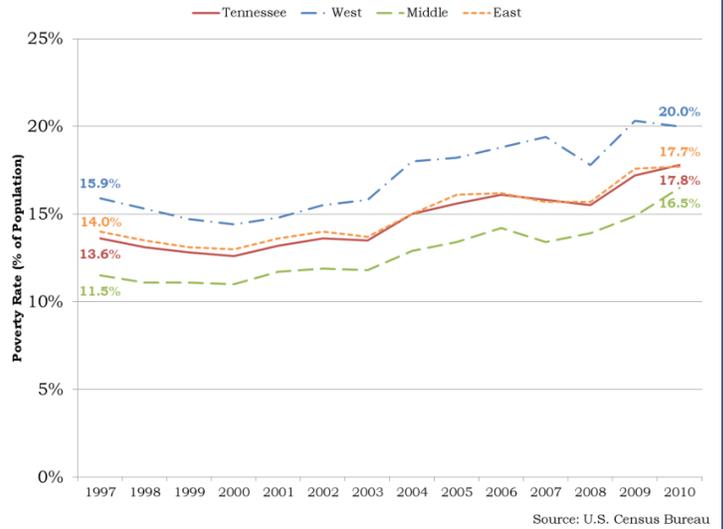
Unemployment rate, a ratio of the number of unemployed people to the number in the labor force, is another critical indicator of states' economic health. **Figure 1.6** presents unemployment rate changes in Tennessee by Grand Division. Recessions of the early and late 2000s led to accelerated growth in this indicator. The state's unemployment rate reached a peak of 10.4 percent in 2009; however, in 2010 it began to decline. West Tennessee has consistently had a higher unemployment rate than the other Divisions.

1.6. Unemployment Rate for Each of Tennessee's Grand Divisions

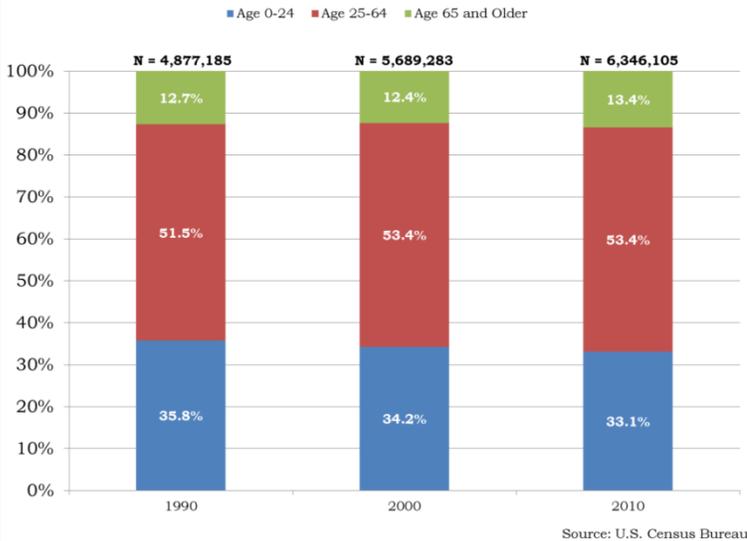


The poverty rate is a key economic and social indicator that denotes inadequacy of family incomes for needed consumption of food and other goods and services. **Figure 1.7** shows that East Tennessee’s poverty rate has been almost identical to statewide estimates. Middle Tennessee has had the lowest poverty estimates, while the West has been consistently higher on this indicator than the other Grand Divisions. Figures 1.5 through 1.7 demonstrate a consistent and large disparity in West Tennessee among social strata in the population. That is, West Tennessee consistently outpaces the other Grand Divisions in personal income per capita; yet it also has the highest rates of poverty and unemployment.

1.7. Poverty Rate for Each of Tennessee’s Grand Divisions



1.8. Changes in Tennessee’s Age Composition



Demographic changes in the state have a direct bearing on student enrollment patterns and student body composition. **Figure 1.8** shows that over the last two decades, the state population has grown relatively older: the share of young people has decreased while the proportions of working-age individuals and of the older population have grown. In absolute numbers, though, the size of the young population has grown by 358,106.

**Figure 1.9** shows changes in the ethnic composition of the population age 18 and younger, potential higher education students, from 2000 to 2010. The share of minority representation has risen dramatically: the Hispanic population grew by almost 178 percent, from 38,899 (less than 3 percent of the young population) in 2000 to 108,053 (over 7 percent of the state’s youth) in 2010. Over the same period, the Asian population grew from 14,129 to 23,023, a sixty-three percent increase, representing now 1.5 percent of the state’s young population. In contrast, the proportion of Caucasians has actually decreased by 5.3 percentage points.

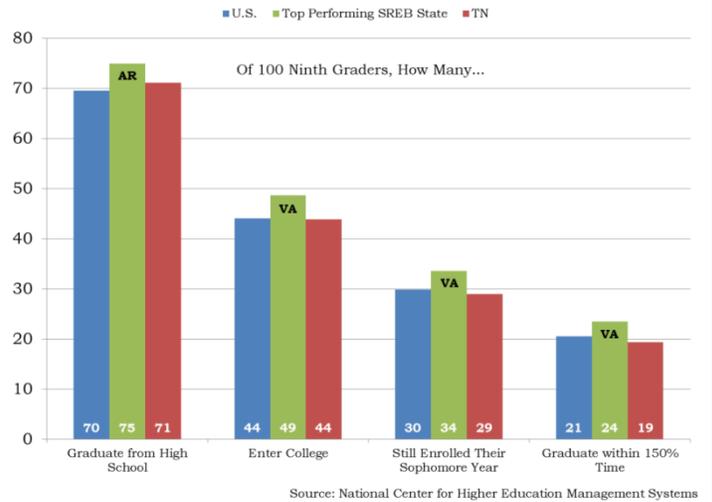
1.9. Changes in Racial / Ethnic Composition among Tennessee’s Youth



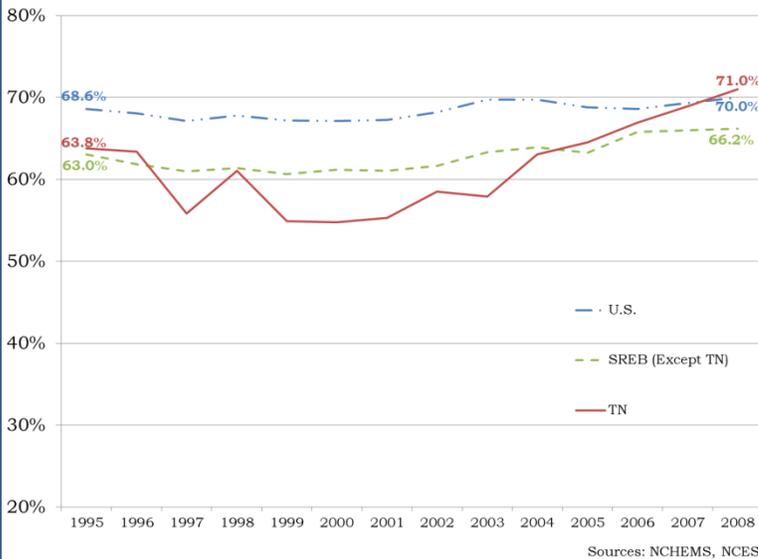
## 2. STUDENT PREPARATION

**Figure 2.1** illustrates the Student Pipeline through various stages of educational attainment. Tennessee’s educational pipeline productivity trails the national average and the top performing SREB state. Only about 19 of 100 ninth-graders in the state eventually graduate from college within 150 percent of the required degree time. However, this is up from 16 out of 100 in the year 2000.

### 2.1. Tennessee Educational Pipeline (2008)



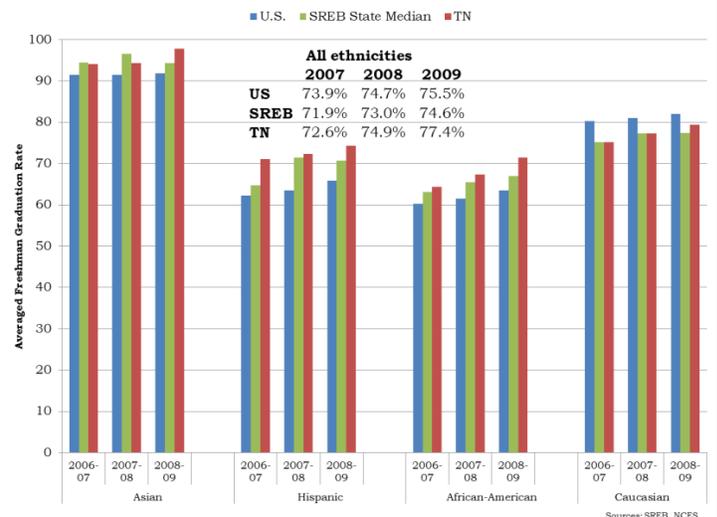
### 2.2. Public High School Graduation Rate U.S., SREB states, and Tennessee (1995-96 to 2007-08)



**Figure 2.2** compares public high school graduation rates for the nation, SREB states, and Tennessee. Since 2000, this rate has risen by over 16 percentage points, surpassing the SREB average. In 2008, the public high school graduation rate reached 71 percent, exceeding the national average for the first time.

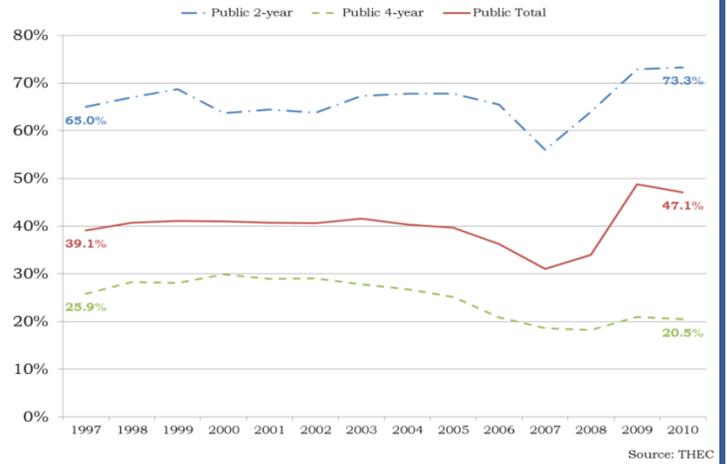
SREB defines the Averaged Freshman Graduation Rate (AFGR) as an estimate of the percentage of an entering high school freshman class graduating in four years. For all high school students, Tennessee generally is doing better than the national and SREB averages (**Figure 2.3**). However, the AFGR differs by year and ethnic group. Asian students have the highest graduation rate, while African-American and Hispanic students show lower rates. For Caucasian students, Tennessee trails the U.S. average; however for minorities, it outperforms national and SREB averages.

### 2.3. Public High School Graduation Rate by Race / Ethnicity (2007-2009)



Graduation from a high school does not always guarantee readiness for college-level work. For example, **Figure 2.4** shows that in fall 2010, 47 percent of freshmen at Tennessee public institutions required remedial or developmental work. This proportion differs significantly by institutional sector. While only 20.5 percent of university students needed remedial education, over 73 percent of community college freshmen took these courses. As of fall 2011, Tennessee public universities no longer offer remediation.

2.4. First-time Freshmen Enrolled in at Least One Remedial or Developmental Course: Tennessee Public Institutions



### 3. STUDENT PARTICIPATION

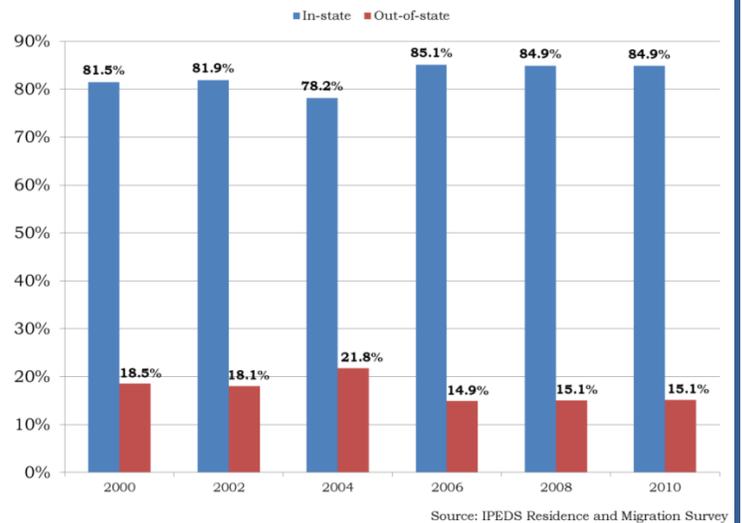
3.1. College-going Rate of High School Graduates Directly from High School: US, SREB States and Tennessee (1992-2008)



**Figure 3.1** presents the college-going rate of high school graduates directly from high school for the nation, SREB states, and Tennessee. The percent of Tennessee’s high school graduates who go on to college immediately after high school has grown from 46.7 percent in 1992 to 61.6 percent in 2008, outpacing the SREB states.

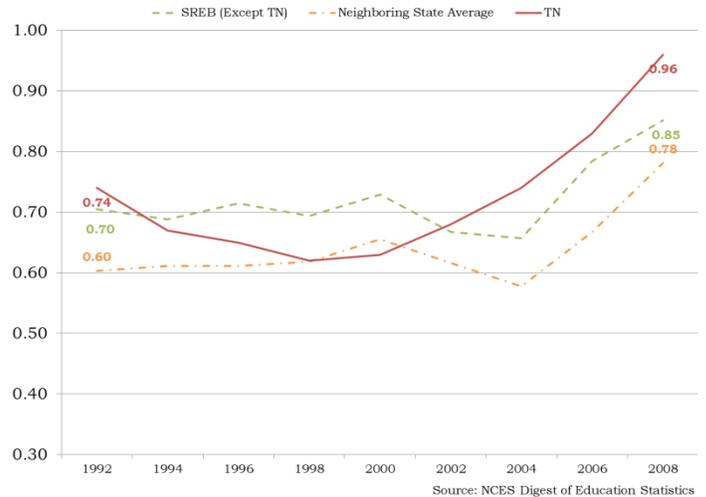
One of the key goals of the Tennessee Education Lottery Scholarship (TELS) program is to retain the best and brightest students in the state. **Figure 3.2** shows that since 2004, the year TELS was implemented, a greater percentage of Tennessee high school graduates is enrolling in state institutions. After an initial increase in the proportion of Tennessee high school graduates opting for in-state institutions, this ratio has remained stable over time.

3.2. Destination of College-going Tennessee High School Graduates (Fall 2000 – Fall 2010)

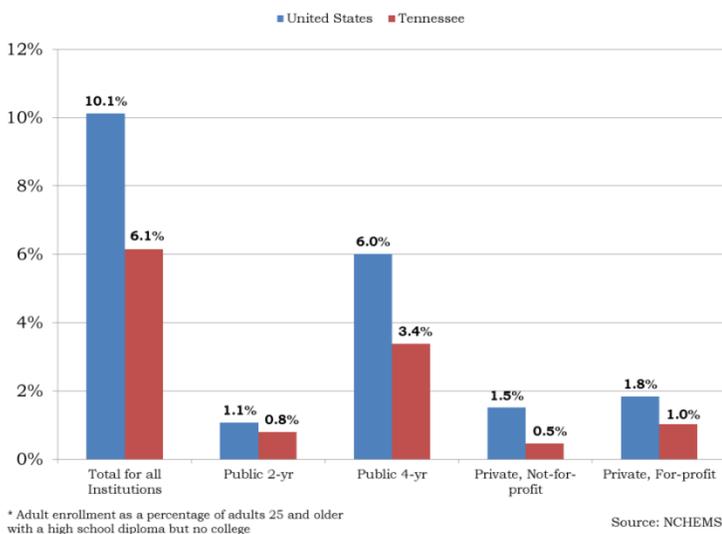


Another measure of student “brain drain” is the ratio of college-bound individuals who leave the state to the number of students moving into the state for college. By this metric, states can be either net exporters or net importers. **Figure 3.3** shows that from 1992 through 2008, Tennessee has remained an importing state; in other words, more freshmen were coming in than moving out. However, in recent years, this ratio has been steadily approaching one (i.e., the annual number of state leavers is getting closer to the number of arrivers). Similar trends are observed for all SREB states and the states that border Tennessee.

3.3. Freshman Students in Degree-Granting Institutions: Ratio of Out-Migration to In-Migration for Tennessee, Tennessee’s neighboring states, and SREB (1992-2008)



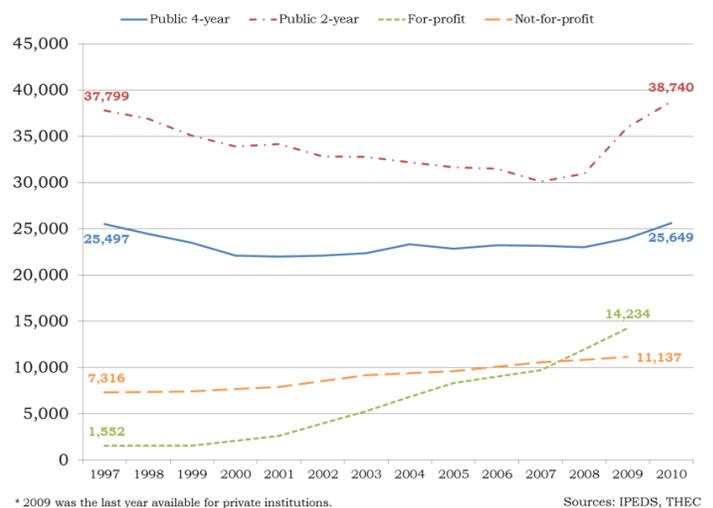
3.4. Adult Participation Rate United States and Tennessee (2009) \*



Participation rates of non-traditional aged students in higher education in Tennessee fall far below the national average (**Figure 3.4**). In 2009, public and private higher education institutions in the state enrolled just six percent of adults who had a high school diploma but no college degree, compared to ten percent nationally. The gap in the adult participation rate in Tennessee and the U.S. differs by institutional sector and is widest at public four-year institutions.

**Figure 3.5** displays the enrollment trends of adult students since 1997. Until 2008, adult enrollment declined steadily at Tennessee’s public 2-year institutions but has started to improve since then. Alternatively, private institutions have consistently enrolled increasing numbers of adult students over the last decade and a half. From 1997 to 2009, adult enrollment increased by 286 percent at private institutions, with for-profit colleges being the primary contributor to the growth of this sector.<sup>2</sup>

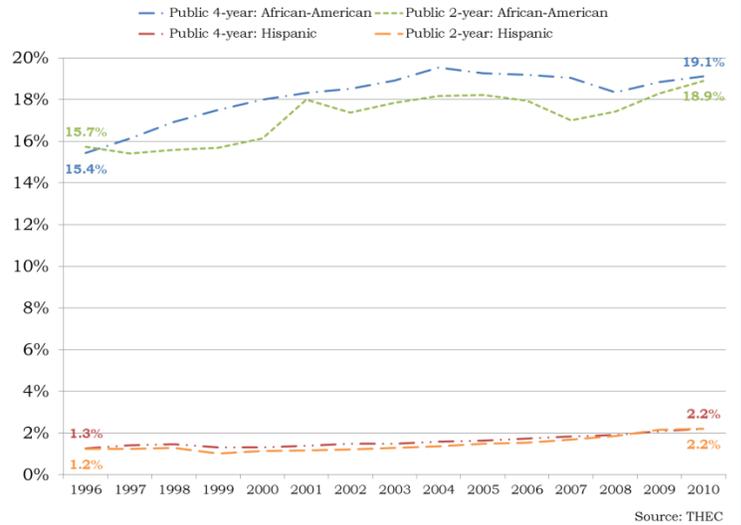
3.5. Tennessee Undergraduate Enrollment 25 Years Old and Above



<sup>2</sup> For-profit institutions’ enrollment data are available for Title IV (Federal Student Aid program) participating institutions only and do not reflect total proprietary enrollment in Tennessee.

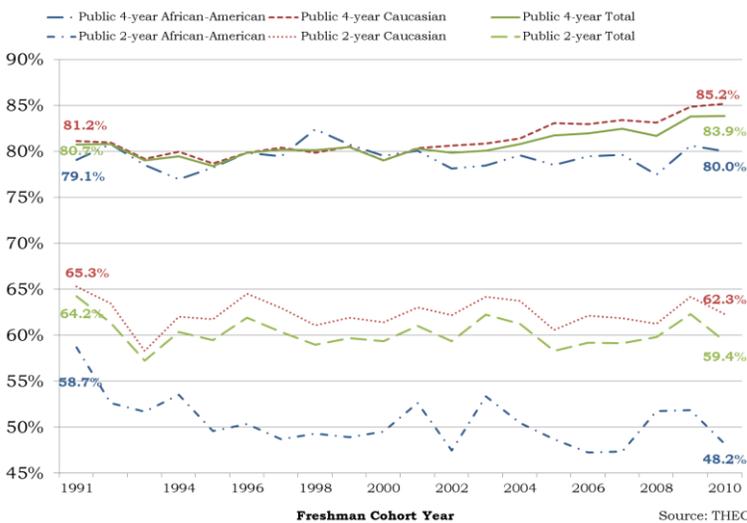
Reflecting the changes in the overall Tennessee population and the subpopulation of young people (Figure 1.9), the race and ethnicity profile of higher education students in the state has gradually changed over time. **Figure 3.6** shows a steady, if small, increase in minority student participation in public higher education. Between 1996 and 2010, the enrollment share of African-American students increased from about 15 percent to 19 percent at both public universities and community colleges. The small share of Hispanic students has also steadily increased at both types of institutions.

**3.6. African-American and Hispanic Student Enrollment Share: Tennessee Public Institutions (1996-2010)**



**4. STUDENT PROGRESSION**

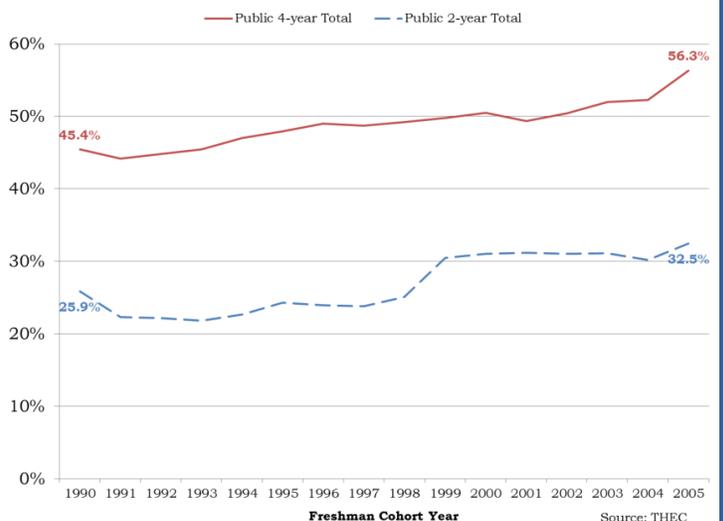
**4.1. One-year Retention Rate, Tennessee Public Institutions Freshman Cohorts (Fall 1991 – Fall 2010)**



**Figure 4.1** demonstrates that the freshman-to-sophomore retention rate at Tennessee’s four-year institutions has increased slightly, from over 80 percent in 1991 to almost 84 percent in 2010. In contrast, the average retention rate at community colleges has dropped from over 64 percent in 1991 to about 59.5 percent in 2010. A significant gap in retention rates is observed across ethnic groups: African-American students demonstrate lower retention in both institutional sectors than Caucasian students.

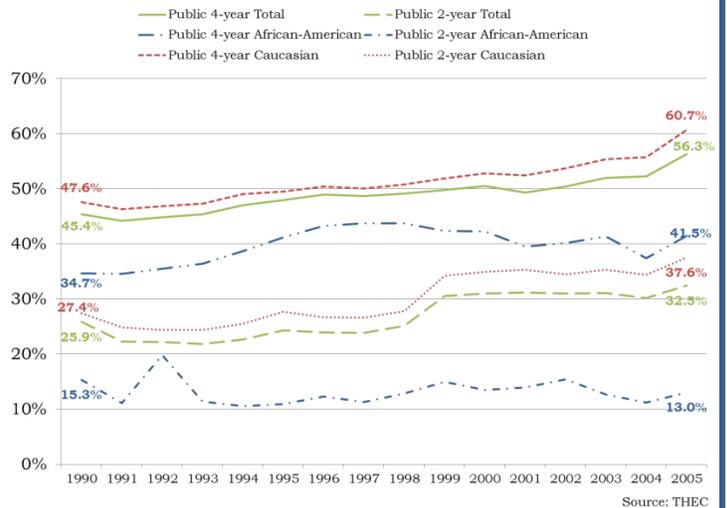
The six-year graduation rate is a measure of student success and institutional productivity. **Figure 4.2** shows this metric for each full-time freshman cohort from 1990 through 2005. Over the past 15 years, the six-year graduation rate has increased by almost 11 percentage points at public universities and over 6.5 percentage points at two-year institutions.

**4.2. Six-year Graduation Rate for Tennessee Public Institutions Freshman Cohorts 1990–2005**

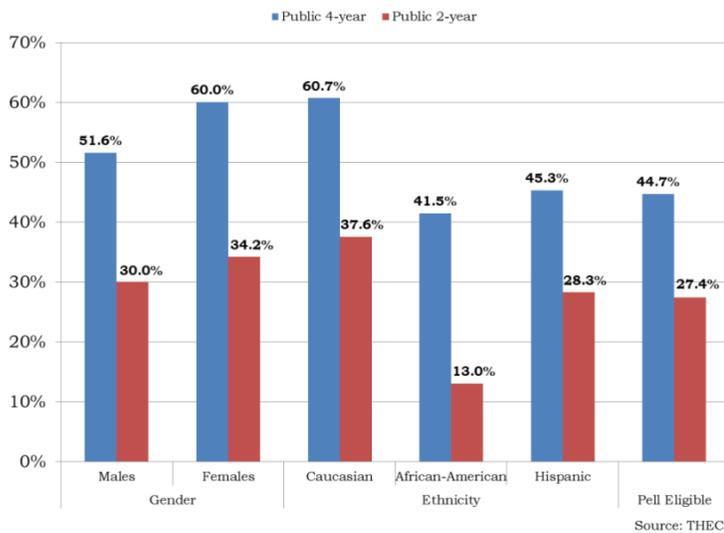


**Figure 4.3** presents six-year graduation rates from 1990 through 2005 for Caucasian and African-American students. At public universities and community colleges, Caucasian students perform better than average while graduation rates for African-American students are below average. These trends have been consistent over time. There has also been improvement in the six-year graduation rate for both groups in the 2004 and 2005 cohorts.

**4.3. Six-year Graduation Rate for Tennessee Public Institutions by Race / Ethnicity: Freshman Cohorts 1990-2005**



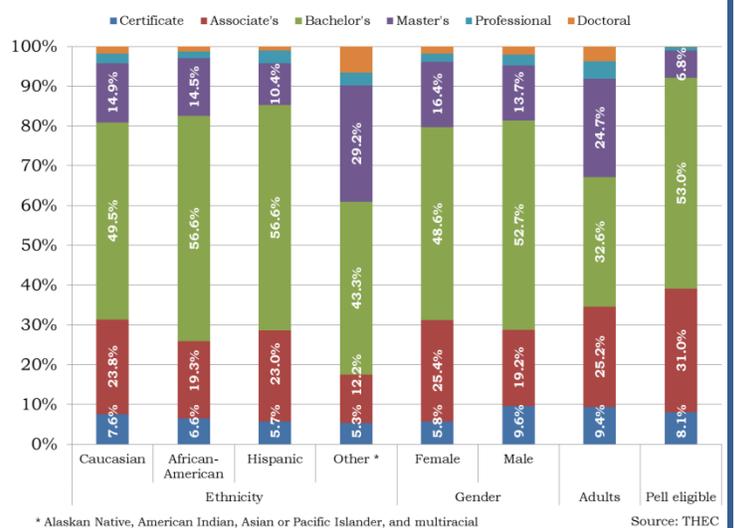
**4.4. Six-year Graduation Rate for Tennessee Public Institutions for 2005 Cohort by Gender, Race / Ethnicity, and Pell Eligibility**



**Figure 4.4** shows the six-year graduation rate for the 2005 freshman cohort by the following categories: gender, race/ethnicity, and Pell eligibility. For every group of students, graduation at public universities is much higher than at two-year institutions. Females demonstrate better performance than males in all institutional types; Caucasian students have the highest graduation rate, followed by Hispanic and African-American students; and Pell-eligible enrollees' graduation rate is quite low, averaging 36 percent for all public institutions in the state.

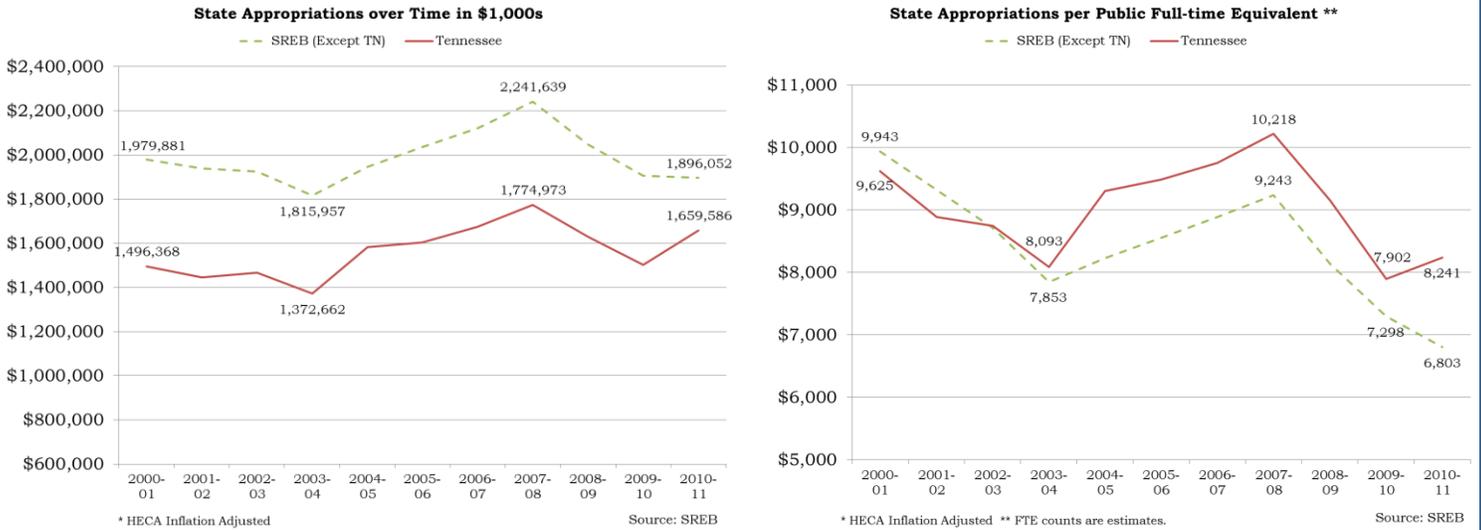
**Figure 4.5** demonstrates the percentage distribution of degrees awarded at public Tennessee institutions in 2010-11 by student category. The most common award across all demographic groups is the bachelor's degree; the associate's degree holds the second position. Although, in absolute numbers, Caucasian students earn more awards than the other ethnic groups, and females earn more degrees than males, the percent distribution of awards among these groups differs only slightly. For adult students, the share of bachelor's degrees is smaller than the combined share of certificates and associate's awards.

**4.5. Total Awards by Award Type, Age, Race / Ethnicity, and Pell Eligibility (2010-2011)**



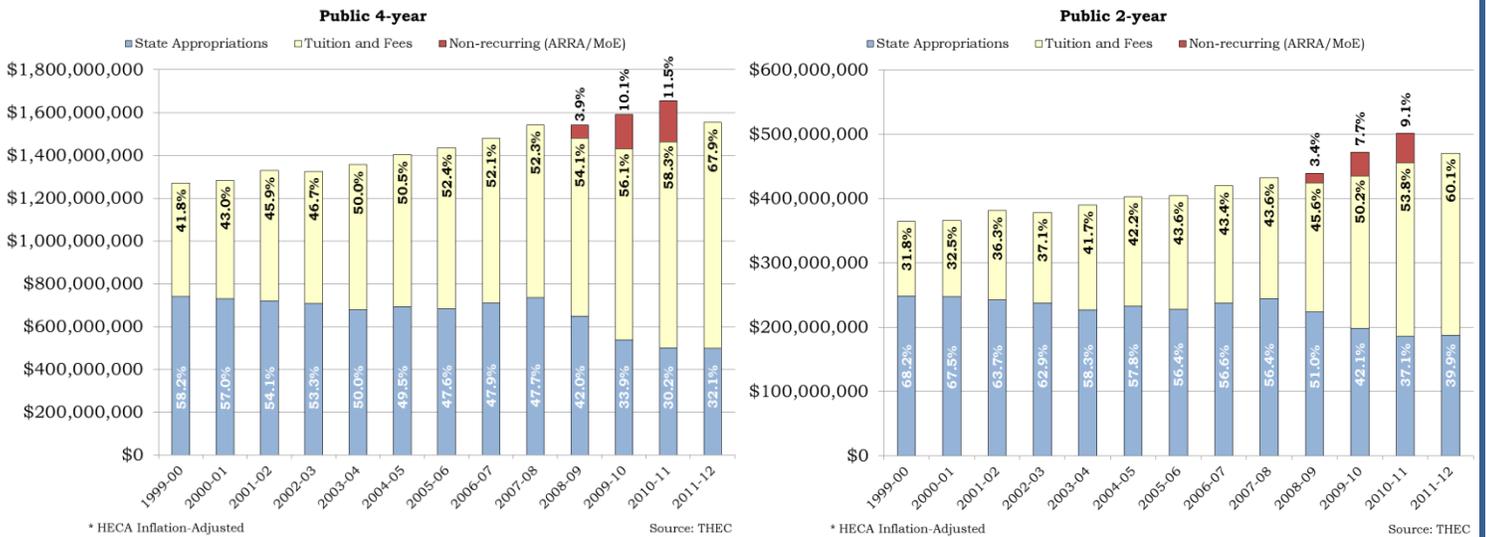
## 5. STATE HIGHER EDUCATION FINANCE

### 5.1. State Appropriations to Public Institutions in Constant 2011 dollars \*



Due to the recent recession and increasing competition among the publicly supported functions of government, state support for higher education has dropped (**Figure 5.1**). Nevertheless, despite fiscal constraints, state appropriations in Tennessee increased in FY 2010-11, while the SREB average continued to fall. In gross numbers, Tennessee appropriates less money than the SREB average; however, per FTE student, it performs above the average for the SREB states.

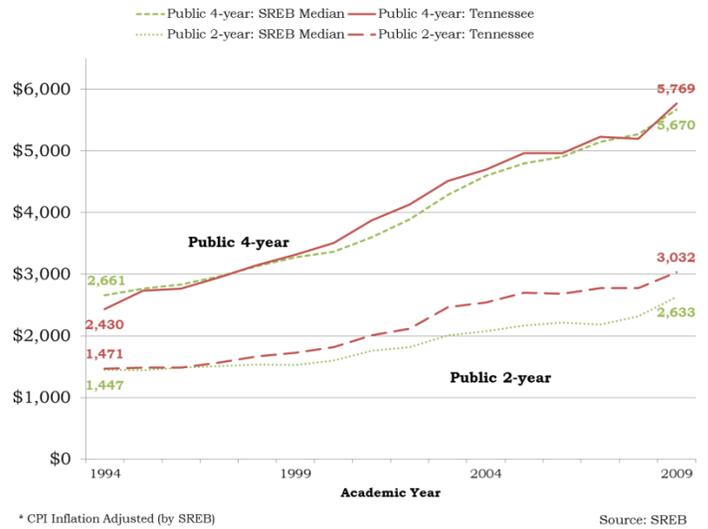
### 5.2. Total Revenue of Public Institutions in Constant 2011 Dollars \*



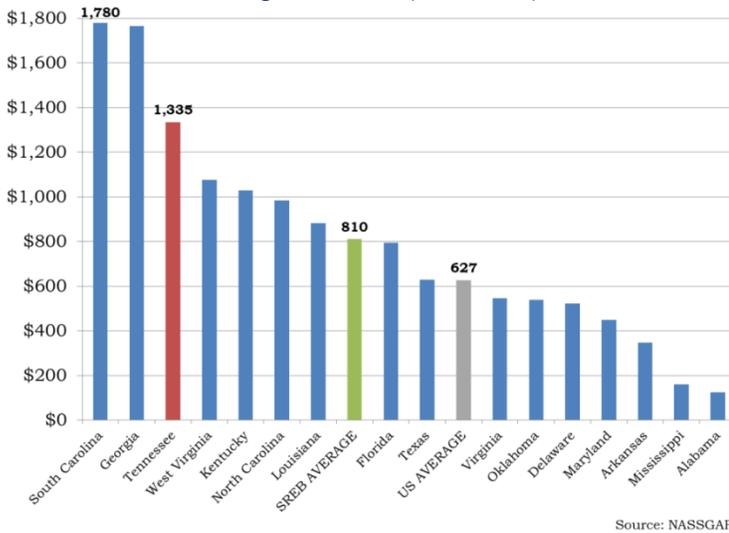
**Figure 5.2** indicates the gradual shift in the make-up of institutional revenue of public 4- and 2-year institutions in Tennessee. It shows total revenue by two major categories—state appropriations and student fees. The revenue structure of public colleges has been changing in the past two decades: For both sectors, state appropriations represent a smaller share of total institutional revenue.

Tuition increases have taken place across all institutional types, with public universities raising their tuition and fees at a faster rate than two-year institutions. **Figure 5.3** demonstrates that, on average, changes in the median university tuition in Tennessee have been in step with the rise of average tuition across the SREB states. However, for public two-year institutions, annual tuition charges in Tennessee have outpaced the average median tuition of other SREB states.

5.3. Median Annual Tuition in Constant 2009 Dollars

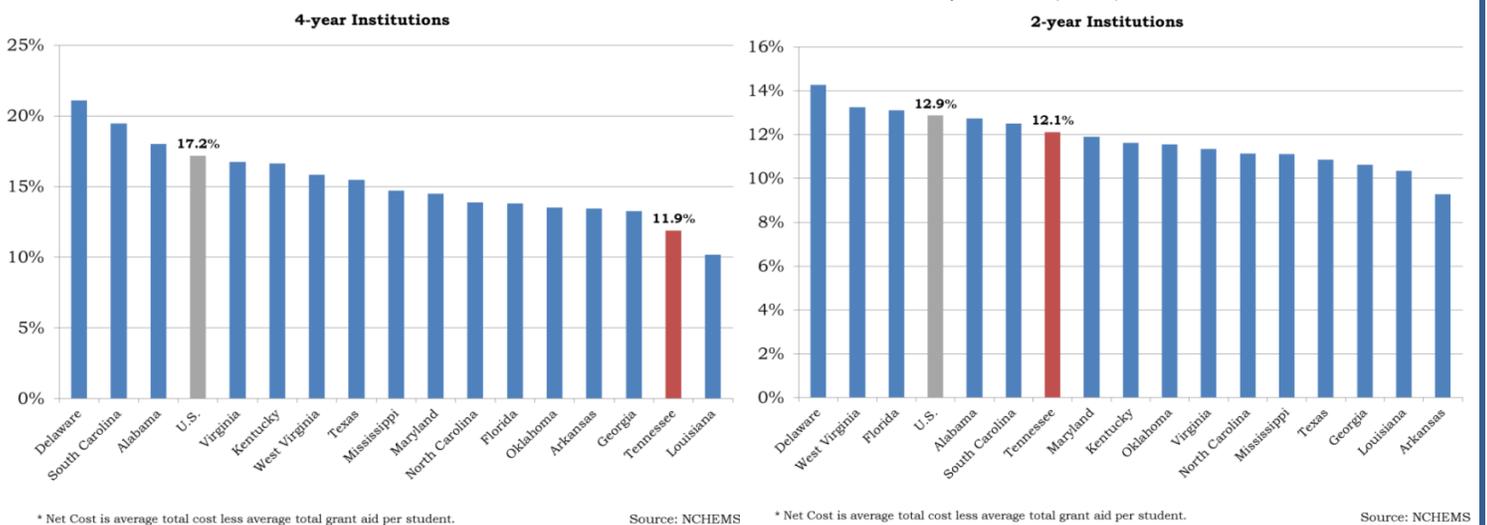


5.4. Total State Grant Aid (Merit plus Need) per Public and Private Undergraduate FTE (2009-2010)



**Figure 5.4** shows the total amount of state grant aid money (both need- and merit-based aid) for SREB states and presents the average values for SREB and the nation. In 2009-10, Tennessee again ranked third nationally and in the SREB in the amount of grant aid per full-time equivalent undergraduate student. This remarkable progress from the 32<sup>nd</sup> position in 2003 is largely attributable to the creation of the Tennessee Education Lottery Scholarship (TELS) program. However, less than 23 percent of state grant aid is need based.

5.5. Net Cost of Attendance as a Percent of Median Family Income (2010) \*



The net cost of college as a percent of median family income is a telling indicator of higher education affordability. **Figure 5.5** shows that public higher education in Tennessee remains comparatively affordable. In addition, availability of TELS awards brings higher education within reach of more Tennessee residents.

## CONCLUSION

From any perspective – longitudinal, regional, or national – Tennessee has made strides in the performance of its postsecondary institutions relative to degree efficiency and credential attainment. While this is to be applauded, there is room for improvement. Persistence and graduation rates can and must increase, and the variation in performance between institutions must decrease. The unique challenges faced by low-income, first-generation, and adult students must be addressed in ways that close performance gaps for these underserved populations. Growth in the population of Hispanic youth will move the academic performance of this population to center stage in the coming decade. College affordability and the ability of postsecondary institutions to sustain recent productivity gains in the face of dwindling state operating appropriations will demand that funding partnerships and paradigms involving state, local, and private entities continue to evolve. Tennessee’s success in addressing these challenges will in large part determine its future economic competitiveness and the quality of life for its citizens.