
*An Analysis of the Economic
Impact of Tennessee's Private
Colleges and Universities:
2012-2013*

August 2014

**Tennessee Independent Colleges
and Universities Association**

*A Major Partner in the
Economic Vitality of Tennessee*
EXECUTIVE SUMMARY

The Tennessee Independent Colleges and Universities Association (TICUA) commissioned this third periodic study to measure the direct or explicit economic impact of private colleges and universities on the state of Tennessee. A hundred percent of the 34 TICUA member institutions submitted data used in the study, so the results are representative of the entire TICUA membership.

The study measures the institutions' 2012-2013 economic impact on the State in terms of (1) business volume, (2) employment and (3) individual income. Not included in the study is the more indirect or implicit impact of private, non-profit colleges and universities on the improved productivity and quality of life achieved through increased levels of education. The study is based on a standard model of economic impact modified for higher education.

The model uses conservative income and employment multipliers to determine economic impact. Institutional expenditures for staff salaries and benefits, operating expenses, capital improvements, and student financial aid were included as inputs to the study.

The following economic impact resulted from the institutional expenditures:

1. Tennessee **business volume** generated by institutional expenditures during 2012-2013 was **\$5.8 billion**.
2. Tennessee **full-time-equivalent jobs** created and sustained during 2012-2013 as a result of the 34 institutions' presence totaled **411,865 jobs** (including the institutions' own 37,223 full-time jobs).
3. Tennessee **individual income** generated by institutional expenditures during 2012-2013 ranged from **\$5.6 billion**, using the more conservative Type I multiplier, to **\$6.4 billion**, using the more liberal Type II multiplier.

In summary, the combined 2012-2013 direct economic impact of the 34 private, non-profit colleges and universities on the State represents **\$11.4 billion**, plus the creation and sustention of more than 411,000 jobs. This impact would largely not have occurred without the presence of these institutions in the State.

This study clearly documents the significant positive force that the State's private, non-profit colleges and universities continue to have in the economic vitality of Tennessee.

INTRODUCTION

Private colleges and universities have been serving the Volunteer State for more than 200 years. In 1956, the precursor of the Tennessee Independent Colleges and Universities Association (TICUA) was established to promote better cooperation among private, non-profit colleges and universities throughout the state of Tennessee. TICUA engages Tennessee's private, non-profit colleges and universities to work collaboratively in areas of public policy, cost containment, and professional development to better serve the State and its citizens.

TICUA membership is limited to independent, non-profit, regionally-accredited colleges and universities in Tennessee. TICUA's 34 member colleges and universities educate nearly 80,000 students annually from across the State, country, and throughout the world and confer nearly 19,000 degrees per year.

TICUA first commissioned a study of the economic impact of private, non-profit higher education in the State in 2007 and repeated the study in 2011. This report, an update of the original studies, represents a critical analysis of the responses from the 34 private, non-profit college and university members of TICUA based on data from the 2012-13 year. Data is included for the following institutions:

Aquinas College
Baptist College of Health Sciences
Belmont University
Bethel University
Bryan College
Carson-Newman University
Christian Brothers University
Cumberland University
Fisk University
Freed-Hardeman University
Johnson University
King University
Lane College
Lee University
LeMoyne-Owen College
Lipscomb University
Lincoln Memorial University

Martin Methodist College
Maryville College
Meharry Medical College
Memphis College of Art
Middle Tennessee School of Anesthesia
Milligan College
Rhodes College
Sewanee: The University of the South
Southern Adventist University
Southern College of Optometry
Tennessee Wesleyan College
Trevecca Nazarene University
Tusculum College
Union University
Vanderbilt University
Watkins College of Art, Design, and Film
Welch College

This analysis measures the direct, explicit economic impact of private, non-profit colleges and universities on the state of Tennessee. It does not include the indirect, implicit economic impact that results from having a trained and educated work force available for local business/industry or from expansion and/or recruitment of business/industry because of the institutions' presence. The analysis is based on the Caffrey model of economic impact, originally developed in 1968 through the American Council on Education.

The model uses conservative income and employment multipliers to determine private, non-profit colleges and universities' economic impact on the following:

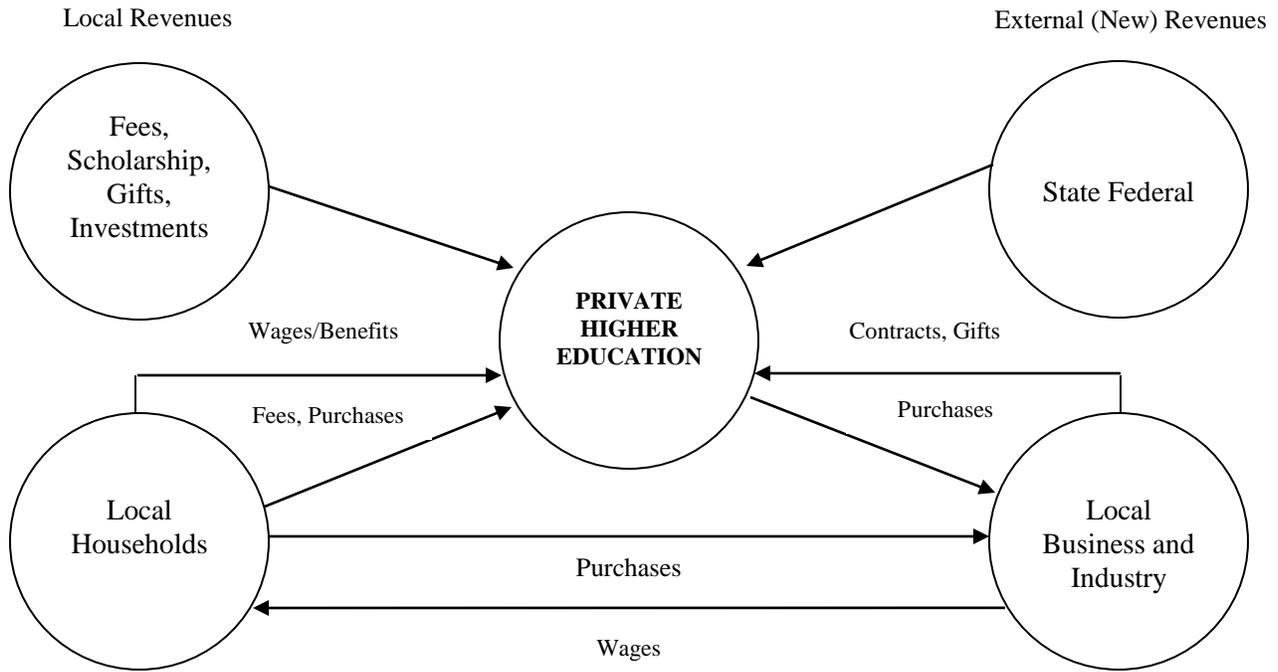
1. Business volume--the total amount of business volume generated in the State as a result of the institutions' direct and indirect expenditures.
2. Employment--the total number of full-time jobs generated and sustained in the State by the institutions' direct and indirect expenditures.
3. Individual income--the total amount of personal income earned by households in Tennessee as a result of the institutions' direct and indirect expenditures.

METHODOLOGY

The study employs a model based on a circular cash flow model as illustrated in Figure 1. The model treats the State as a semi-closed economic system, with funds entering the system through the colleges and universities from both local and external sources.

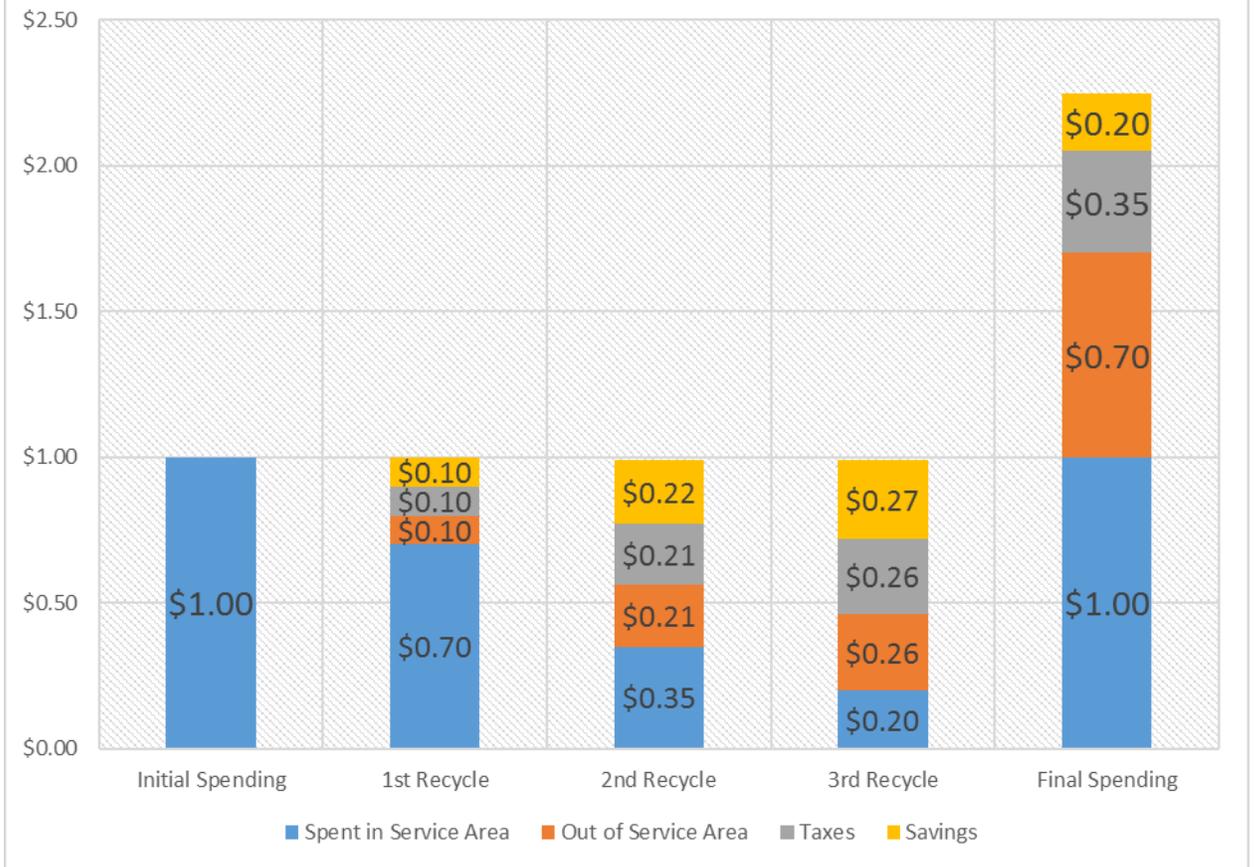
Local sources of revenue include student tuition and fees, endowment/investment income, auxiliary enterprises revenue, private gifts/grants/contracts, private scholarships and fellowships, and other miscellaneous local revenue. External sources of revenue include federal and State grants/contracts, State lottery scholarships and other State financial aid, and federal student financial aid.

Figure 1: Circular Cash Flow Model



Institutions circulate their revenues through the State’s economy via expenditures for employee salaries/benefits, facilities maintenance and construction, student financial aid, and local purchases of equipment and supplies. These expenditures are then re-circulated through the State’s economy, increasing in value and having a multiplier or secondary impact as Tennessee businesses and households make their own expenditures and generate jobs as a result. Figure 2 illustrates this multiplier principle.

Figure 2: How the Multiplier Works



The institutional expenditures shown below for 2012-2013 were incorporated into a MS Excel spreadsheet template containing the economic impact computer model.

EXPENDITURES

Data	Fiscal Year
	2012-13
WAGES	\$2,902,442,082
NON-SALARY EXPENDITURES	\$1,945,290,305
CAPITAL EXPENDITURES	\$174,447,909
STUDENT FINANCIAL AID	\$396,058,468
NET WAGES IN STATE	\$2,176,831,562
NON-SALARY, IN STATE	\$1,458,967,729
CAPITAL, IN STATE	\$130,835,932
FT COLLEGE/UNIV. JOBS	37,223
TOTAL EXPENDITURES	\$5,418,238,764
EXPENDITURES IN STATE	\$4,162,693,690

Expenditures during 2012-2013 by the 34 institutions totaled \$5.4 billion, with \$4.2 billion estimated to have been spent in Tennessee. For the purposes of this study, it was estimated that approximately 77 percent of the institutions’ expenditures were made, on the average, within the State’s borders. This percentage represents the average of the responding institutions’ estimates of expenditures made within the State.

RESULTS

The following economic impacts can be estimated to have occurred as a result of these expenditures.

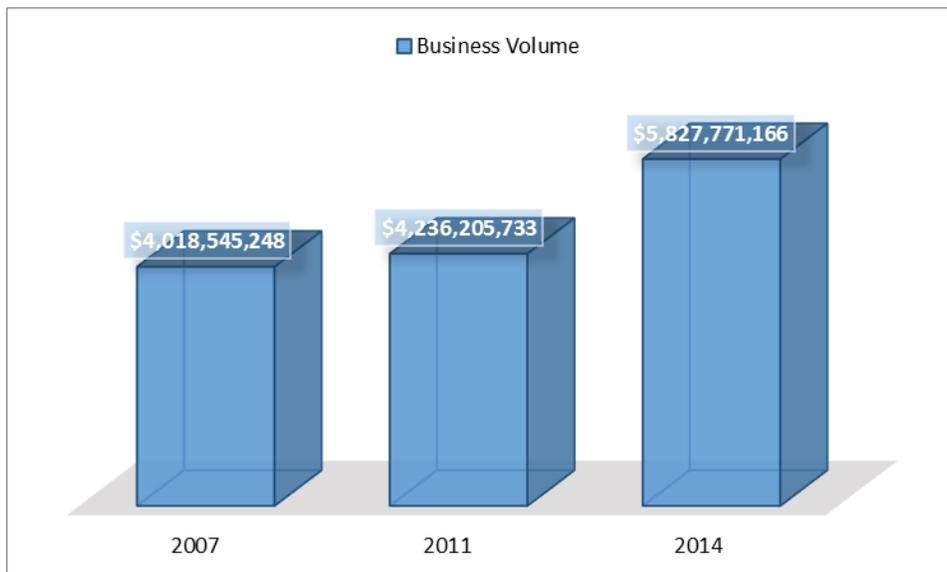
Business Volume Impact

The business volume impact generated in Tennessee by the expenditures of the 34 private, non-profit college and university members of TICUA is shown below.

<u>Business Volume Impact</u>	<u>2012-13</u>
BUSINESS VOLUME	\$5,827,771,166

As shown above, the State's businesses and industries benefitted greatly from the presence of the 34 private, non-profit institutions, with more than \$5.8 billion in economic impact generated during 2012-2013 alone. Figure 3 graphically illustrates the business volume generated by the institutions' presence, including comparative data from the 2007, 2011, and 2014 studies.

Figure 3: Business Volume



Employment Impact

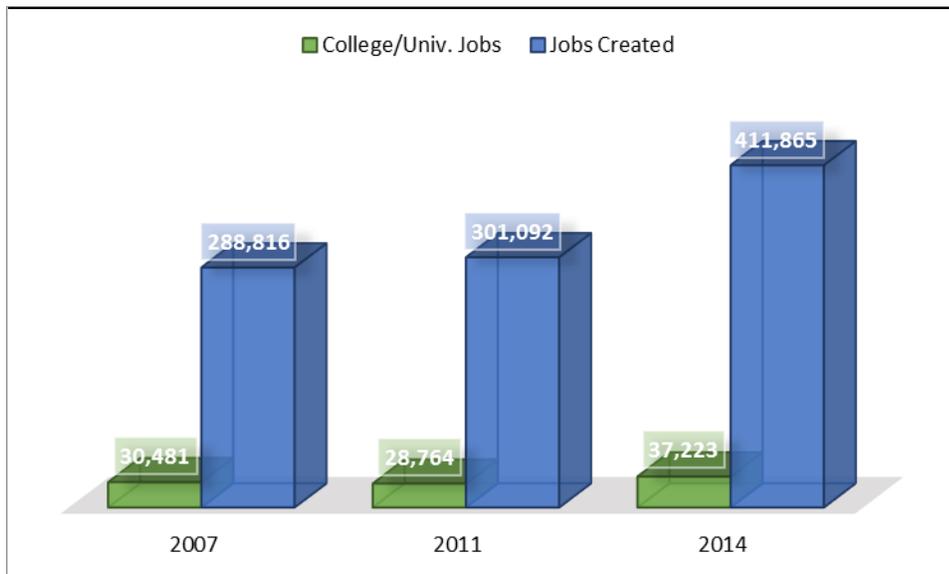
The employment impact in terms of full-time-equivalent (FTE) jobs created and sustained in Tennessee by private, non-profit higher education's expenditures is shown below:

<u>Employment Impact</u>	<u>2012-13</u>
JOBS CREATED	411,865

While the 34 private, non-profit institutions' own FTE jobs totaled 37,223 jobs during 2012-2013, the State employment created and sustained by their expenditures totaled 411,865 FTE jobs.

Figure 4 graphs the relationship between the institutional FTE jobs and FTE jobs generated in Tennessee by the presence of the private, non-profit colleges and universities. Comparative data is included from the 2007, 2011, and 2014 studies.

Figure 4: Jobs Created



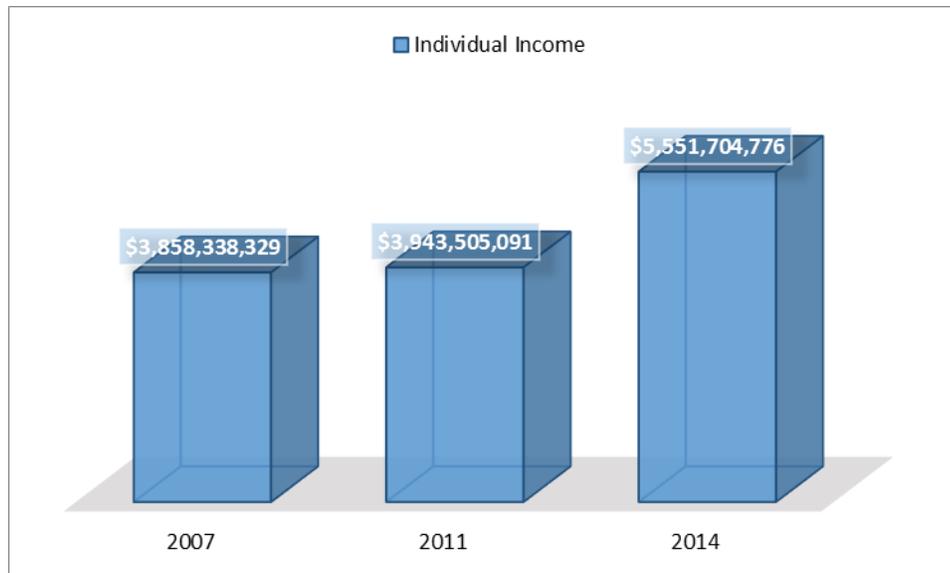
Individual Income Impact

The impact of the 34 private, non-profit institutions’ expenditures on personal income in Tennessee is calculated using two different multipliers to produce a range of impact, shown below as Type I and Type II. The Type I multiplier is the more conservative measure.

<u>Individual Income Impact</u>		2012-13
TYPE I MULTIPLIER		\$5,551,704,776
TYPE II MULTIPLIER		\$6,379,945,648

The impact of expenditures of the 34 private, non-profit colleges and universities on personal income in the State ranged from \$5.6 billion to \$6.4 billion during 2012-2013. Figure 5 graphically illustrates the range of Tennessee personal income generated by these institutions’ presence in the State. Comparative data is included from the 2007, 2011, and 2014 studies.

Figure 5: Range of Individual Income



In summary, the combined 2012-2013 economic impact of the 34 TICUA member institutions on Tennessee represents **\$11.4 billion** (the combined total of Business Volume and

Individual Income). This impact would likely not have occurred without the presence of the 34 private, non-profit colleges and universities in the State.

CONCLUSIONS

The results of this economic impact study clearly demonstrate that independent colleges and universities are major contributors to the economic base of Tennessee. In addition to the more implicit impact of these institutions on the improved productivity and quality of life achieved through increased levels of education, their explicit economic impact is significant. This economic impact has been expressed in this study in terms of jobs created and sustained, business volume generated, and personal income earned within the State.

As these institutions continue to grow in enrollment and/or budget, their economic impact on Tennessee will increase similarly. Private higher education is clearly a major partner and force in the economic vitality of Tennessee.