

The image features a landscape with three flagpoles in the background. From left to right, the flags are red with a white emblem, the United States flag, and a blue flag with white text. In the foreground, there is a large, stylized 'MTSU' logo in white with a black outline, and the words 'ECONOMIC IMPACT' in white, bold, sans-serif capital letters below it. The background includes green trees, a building, and a blue sky with clouds. A row of yellow flowers is at the bottom of the frame.

MTSU

ECONOMIC IMPACT



Economic Impact

of Middle Tennessee State University on the State of Tennessee



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THE FUNCTION OF EDUCATION IS TO TEACH ONE TO THINK INTENSIVELY AND TO THINK CRITICALLY.
INTELLIGENCE PLUS CHARACTER THAT IS THE GOAL OF TRUE EDUCATION.
BE NOT SIMPLY GOOD, BE GOOD FOR SOMETHING.

NO PROMPT GROWS WHERE IS NO PLEASURE TAKEN. IN BRIEF, SIR, STUDY WHAT YOU MOST AFFECT
LEARNING IS NOT ATTAINED BY CHARGE, IT MUST BE DILIGENCE
FOR WITH DILIGENCE

EDUCATION IS THE KEY TO UNLOCK THE GOLDEN DOOR OF FREEDOM.

LEARNING IS NOT ATTAINED BY CHARGE, IT MUST BE DILIGENCE
FOR WITH DILIGENCE

THESE ARE SOME THINGS YOU LEARN BEST IN CALM, AND SOME IN STORM.



A MAN MAY DIE, NATIONS
THE TRUTH

Executive Summary

Embedded in their communities' socioeconomic fabric, modern universities are increasingly expanding their roles beyond those of education, knowledge creation, and dissemination. Understanding universities' roles in their communities is the first step in evaluating their contributions. Commissioned by the Office of the President, this study updates the 2008 study and analyzes MTSU's role in the Rutherford County, Nashville MSA, and Tennessee economies, highlighting two specific contributions of MTSU's activities: skilled workforce and economic impact.

Major Study Findings

I. MTSU and Human Capital Formation

- MTSU attracts and retains talent in the state. In 2016,
 - 90 percent of the 22,050 students were from Tennessee;
 - 78 percent of alumni were living in Tennessee.
- MTSU plays a critical role in human capital formation in counties across Tennessee. For example, in 2015, MTSU graduates accounted for

- Nearly one in every two adults with bachelor's or above educational attainment in Rutherford County;
- One in every five adults with bachelor's or above educational attainment in the Nashville MSA.

II. Economic Impact

Universities are economic engines for communities, instrumental in human capital formation. Local spending associated with university activities is a boon to local business and government. MTSU's total economic impact includes payroll spending, non-payroll operating spending, construction expenditure, students' spending, and visitors' spending. We estimate MTSU's total economic impact (direct, indirect, and induced) in 2016 as

- 8,400 jobs across Tennessee;
- Over \$408 million in wages and salaries;
- \$1.12 billion in total economic activity (business revenue);
- More than \$88 million in local, state, and federal taxes.

MTSU and its associated activities make sizable contributions to economic prosperity in Tennessee, the Nashville MSA, and Rutherford County, resonating across the regional economy. MTSU is an organic part of the state, Nashville MSA, and Rutherford County economies.





I. Introduction

Founded as Middle Tennessee State Normal School in 1911, MTSU is now the largest undergraduate institution in the state. As a higher education institution, MTSU plays a dynamic role at the local, regional, and even state levels. MTSU attracts talent to the area, provides needed cultural activities, gives educational opportunities to area residents, supports research, and drives creativity and innovation. The impact of MTSU on the community's economy is even greater. As the second largest employer in Murfreesboro and the third largest in Rutherford County, MTSU employs over 2,500 individuals. These employees plus 22,050 students have significant purchasing power in the local economy.

This study aims to answer the following questions:

- How does MTSU affect human capital formation in the state, the Nashville MSA, and Rutherford County?
- What would be the short-term impact on the state economy if MTSU-related activities ceased to exist?

This report examines MTSU's role in human capital formation (Chapter 2), its economic impact (Chapter 3), and its community relations (Chapter 4).

II. MTSU and Human Capital Formation

The socioeconomic dynamics of Rutherford County, the Nashville MSA, and Tennessee are influenced by MTSU's presence. In FY 2016, 22,050 students were enrolled at MTSU: 30 percent from Rutherford County, 60 percent from the Nashville MSA, and 90 percent from Tennessee. MTSU's presence retains a significant portion of talent in the state. As displayed in the map, Rutherford, Davidson, Williamson, and Shelby counties are important pipelines for MTSU students, representing about 30 percent, 14 percent, 7 percent, and 6 percent of student enrollment, respectively. FY 2016 enrollment data shows the MTSU student population includes representatives of almost all Tennessee counties.

MTSU alumni tend to stay in Tennessee after graduation, making the University a powerful supplier of a skilled workforce for Tennessee businesses. Of all MTSU alumni, 21 percent live in Rutherford County, 55 percent in the Nashville MSA, and 78 percent in Tennessee. The most popular counties for MTSU alumni are Rutherford (21%), Davidson (13%), and Williamson (7%). MTSU alumni are spread across counties as shown in the map.

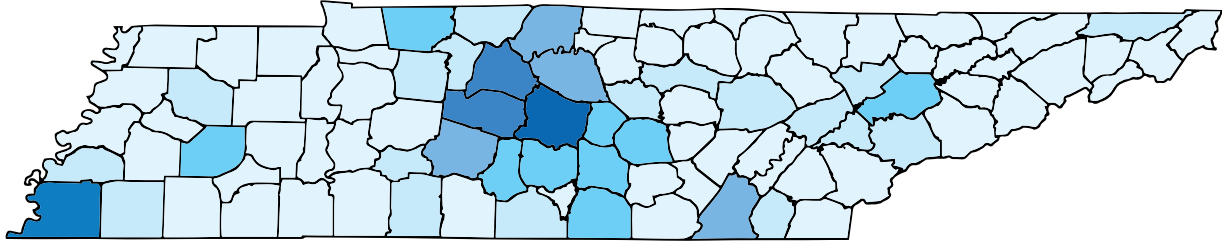
How does MTSU affect socioeconomic dynamics?

Historically, MTSU has always played a role in creating a regional talent pool. In the past five years, MTSU has retained even more graduates in the area. In 2015, MTSU graduates accounted for a large share of bachelor's degree holders and higher in Rutherford County (48 percent, up three percentage points from 2010), in the Nashville MSA (nearly 18 percent) and in Tennessee (almost 10 percent).

Given the number of MTSU alumni in the region, MTSU's contributions to the success of the state's education policies, such as Drive to 55, are critically important. Between 2014 and 2015, the number of bachelor's degree holders and above in Rutherford County rose by 3,400. MTSU graduates accounted for 29 percent of this increase as well as 15 percent of the Nashville MSA's increase in bachelor's degree holders and higher.

In 2015, MTSU accounted for one in every five public university undergraduate degrees and 12.26 percent of total undergraduate degrees (private and public universities) in Tennessee.

Concentration of Students by County, FY 2016



0-50

51-150

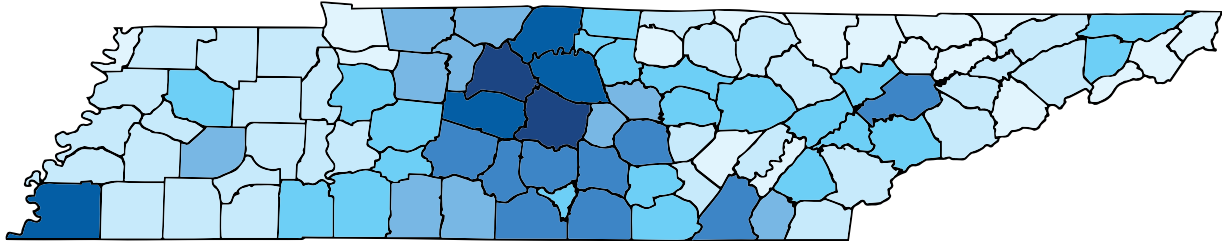
151-400

401-1,000

1,001-6,000

6,000+

Concentration of Alumni by County, 2016



0-50

51-100

101-500

501-1,000

1,001-4,000

4,001-9,000

17,000+

MTSU Attracts and Retains Talent in the Local Community

	Educational Attainment (Population age 25 and older)			
	Rutherford County		Nashville MSA	
	2010	2015	2010	2015
Total Population Ages 25 and Older	154,397	174,081	1,011,432	1,170,695
Bachelor's and Above Degree				
Number	40,606	52,413	300,395	378,212
Percent	26.30%	30.11%	29.70%	32.31%
Human Capital Stock				
MTSU Alumni (as of 2015)				
Number	18,317	25,331	51,047	67,451
Percent of Total Alumni	19.3%	20.7%	53.8%	55.0%
Percent of Alumni Residing in Tennessee	25.1%	26.5%	69.9%	70.6%
Percent of Population with Bachelor's and Above Degree	45.1%	48.3%	17.0%	17.8%
MTSU has a total of 122,609 alumni across the world, of whom 95,556 live and work in Tennessee across 95 counties.				
Human Capital Flow				
Annual Increase in Bachelor's and Above Ed. Attainment (2014–2015)	Rutherford County		Nashville MSA	
Increase in Population with Bachelor's and Above Degree	3,425		18,161	
MTSU Graduates Staying in the Region	1,007		2,680	
Percent Increase Due to MTSU Graduates	29.39%		14.76%	
Number of Freshmen in 2015	684		1,449	
Net Local Retention of Skilled Workforce Due to MTSU	+323		+1,231	

A total of 4,872 degrees were conferred in 2015.

Sources: MTSU Fact Book 2016, American Community Survey (2009-2015), and BERC estimates



III. Economic Impact

Inputs

BERC collected data on MTSU-related revenues and expenditures from MTSU's *Fact Book*, published annual reports, individual departments, and master calendar. On the input side, all MTSU-related spending amounted to \$745 million dollars in 2016. The breakdown of this spending can be seen below. Non-payroll spending includes operating and capital expenditures (three-year average). These estimates (direct spending) are used to calculate the economic impact of MTSU on the state of Tennessee using industry-standard IMPLAN software.

Assumptions

Payroll. Payroll spending in 2016 totaled \$148.7 million. This excludes wages of student workers, stipends, and scholarships and fellowships, as these are accounted for in student spending.

Non-Payroll. Non-payroll spending is the sum of operational expenses (excluding payroll and capital expenditures).

Capital Expenditures. Capital expenditures represent a significant portion of MTSU-related economic activities. Because of the fluctuating nature of capital expenses, BERC uses a three-year average of construction and renovation spending.

Student and Visitor. For student spending, BERC estimated spending patterns using the *Cost of Attendance: Annual Estimated Budget* published by the University. The largest areas for student spending were housing, food and beverages, and transportation.

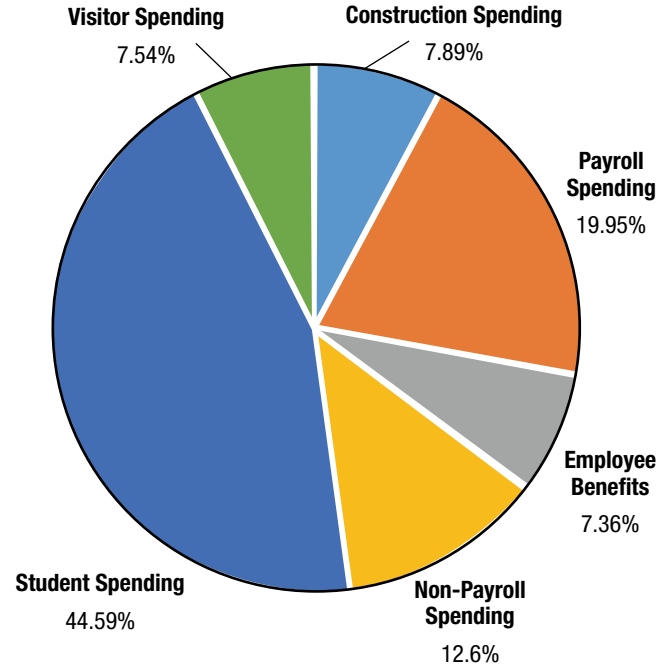
In order to determine campus visitor spending, BERC calculated the estimated number of visitors using departmental inquiries, MTSU's calendar, the 2016 MTSU *Fact Book*, and post-event releases. Attendance per event is based on published attendance data or published expected attendance.

To determine visitors' spending, BERC used previous BERC surveys of day-tripper and overnight expenditures, adjusted to reflect the average hotel rate in the MTSU area. The average spending per day was \$215 for a person staying overnight and \$62 for a day-tripper.

MTSU-Related Expenditures, 2016

Categories	Amount
Payroll	\$148,651,260
Employee Benefits	\$54,826,632
Non-Payroll Spending	\$94,382,112
Construction Spending	\$58,766,667
Student Spending	\$332,198,364
Visitor Spending	\$56,164,725
Total Expenditures	\$744,989,760

Total MTSU-Related Expenditures: FY 2016



Visitor Attendance Assumptions

	Day-Trippers	Hotel Nights
Culture ¹	17,267	0
Business ²	3,609	74
Conference ³	657	12,476
Customs and New Students	2,162	5,130
TSSAA ⁴	34,900	34,900
Athletic Events ⁵	12,795	10,236
Miller/TN Livestock ⁶	33,422	137,615
Graduations	92,600	0
Camps	14,967	0
Total	212,379	200,431

We assume:

1. 100% of cultural event attendees are day-trippers.
2. 98% of business event attendees are day-trippers; 2% stay in a hotel.
3. 5% of conference attendees are day-trippers; 95% stay in a hotel.
4. 50% of TSSAA attendees are day-trippers; 50% stay in a hotel.
5. 5% of attendees are day-trippers; 4% stay in a hotel.
6. 40% of attendees are day-trippers; 60% stay in a hotel.

Total Attendance Data: 2016 MTSU Fact Book, calendar, departments.

MTSU's Economic Impact by Category

The estimates in the following section are of the total impact in each respective category. This total includes three types of impact: direct, indirect, and induced. Direct impact is the change in economic activity during first-round spending. Indirect impact is the change in sales, income, or employment in the region in industries providing goods and services to the University. Induced impact is the result of employee spending.

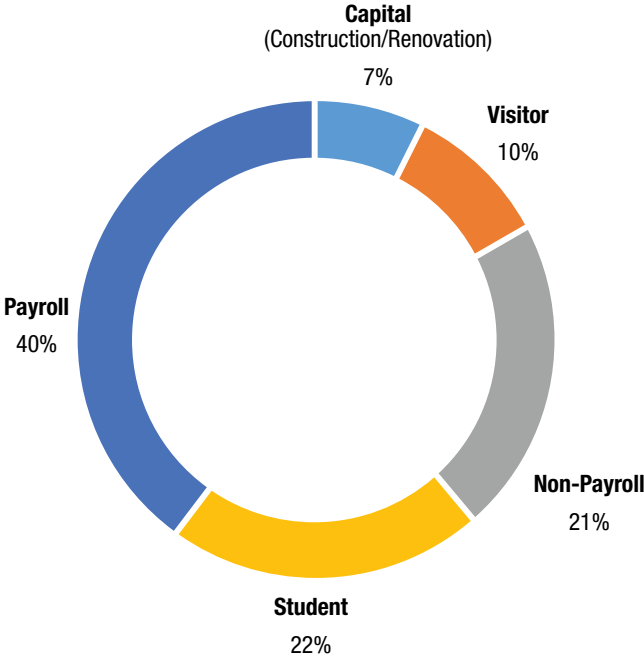
Employment Impact of MTSU, 2016

Type of Expenditure	Jobs
Non-Payroll	1,766
Payroll	3,357
Capital (Construction/Renovation)	624
Student	1,801
Visitor	829
Total	8,377

Economic Impact: Employment

In FY 2016, the total employment impact of MTSU was 8,377 jobs, of which 2,259 (FTE) were MTSU's direct employment. Payroll spending along with direct MTSU employment created nearly 3,400 jobs. The second largest employment impact comes from student expenditures, accounting for about 1,801 jobs. Non-payroll, visitor, and capital expenditures created 1,766, 829, and 624 jobs, respectively.

Employment Impact of MTSU



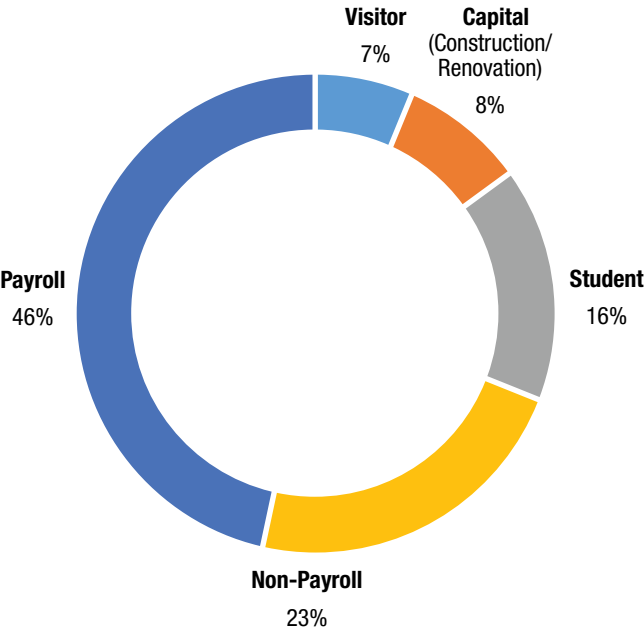
Economic Impact: Personal Income

The total personal income impact of MTSU in 2016 totaled over \$408 million. MTSU payroll spending accounted for nearly \$190 million in personal income, followed by non-payroll expenditures, which created \$92 million in personal income. Student, capital, and visitor spending created a total personal impact of \$64 million, \$34 million, and \$27 million, respectively.

Personal Income Impact of MTSU, 2016

Type of Expenditure	Amount
Non-Payroll	\$92,364,345
Payroll	\$189,912,580
Capital (Construction/Renovation)	\$34,371,086
Student	\$64,353,081
Visitor	\$27,170,909
Total	\$408,172,001

Personal Income Impact of MTSU



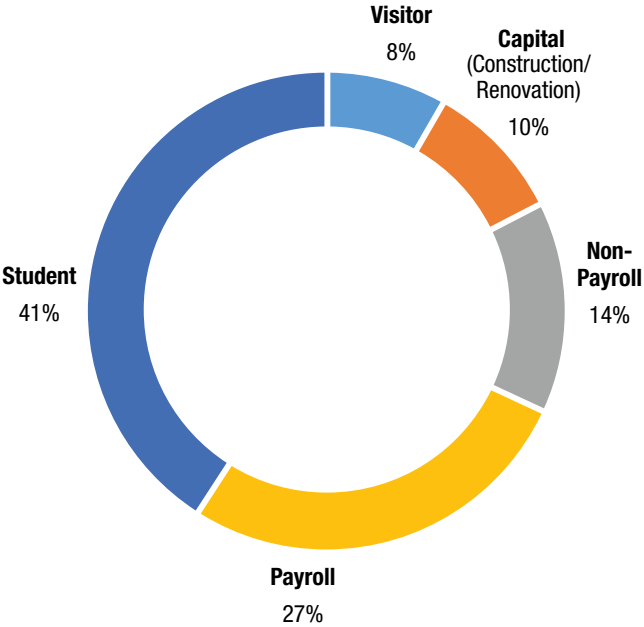
Economic Impact: Business Revenue

The combined direct, indirect, and induced impact of MTSU on business revenue in FY 2016 was \$1.1 billion. The largest sources of impact were student expenditures, creating \$457 million for the area, and payroll expenditures, creating \$302 million. Non-payroll, capital, and visitor expenditures also greatly affected the economy, creating business revenue impacts of \$159 million, \$107 million, and \$91 million, respectively.

Business Revenue Impact of MTSU, 2016

Type of Expenditure	Amount
Non-Payroll	\$159,110,609
Payroll	\$302,371,251
Capital (Construction/Renovation)	\$107,323,396
Student	\$457,364,239
Visitor	\$90,735,587
Total	\$1,116,905,082

Business Revenue Impact of MTSU



Fiscal Impact of MTSU, 2016

Type of Expenditure	Sales Tax	Property Tax	Other Taxes/Fees	Federal Taxes	Total
Non-Payroll	\$2,179,404	\$25,294	\$2,186,768	\$18,716,663	\$23,108,129
Payroll	\$4,832,535	\$2,014,879	\$1,464,862	\$12,085,945	\$20,398,221
Capital (Construction/Renovation)	\$1,589,643	\$662,786	\$560,066	\$6,311,340	\$9,123,835
Student	\$5,806,338	\$2,420,897	\$1,780,673	\$14,691,581	\$24,699,489
Visitor	\$2,917,886	\$1,216,585	\$757,298	\$5,965,017	\$10,856,786
Total	\$17,325,806	\$6,340,441	\$6,749,667	\$57,770,546	\$88,186,460

Fiscal Impact

In FY 2016, University, student, and visitor expenditures together created a total fiscal impact of over \$88 million. A majority (\$58 million) of taxes generated were federal, while state and local taxes accounted for \$30 million. As displayed in the table, student spending and non-payroll expenses played the largest roles in tax generation.



IV.MTSU and Community Relations

First-Generation Students

MTSU prides itself on creating resources and opportunities for first-generation college students, who accounted for about 49 percent of MTSU Graduating Senior Survey respondents in 2016. The Scholar's Academy program, created to serve the needs of first-generation and Pell-eligible students, begins with a two-week summer institute before the freshman year and offers a special section of UNIV 1010 to give students a strong start to their MTSU career.

Adult Learners

According to the Tennessee Higher Education Commission, MTSU has the largest headcount of adult learners among the state's public universities. Over 27 percent of MTSU students are adult learners. Additionally, adult learners accounted for 35 percent of undergraduate completions and 85 percent of graduate completions in the 2015–2016 academic year. The adult-learner population is essential to MTSU's campus.

Special scholarships and offices such as the June Anderson Center for Women and Nontraditional Students help provide students with the financial and personal resources they need to succeed.

Veterans

For the fourth consecutive year, MTSU has been named a “military-friendly institution” by *G.I. Jobs* magazine. The Charlie and Hazel Daniels Veterans and Military Family Center recently opened as the first VetSuccess on Campus (VSOC) program in Tennessee. Its purpose is to provide student veterans with encouragement, enrollment, and employment support, and to broaden the student veteran knowledge base. MTSU offers additional support to ensure student veterans' success through scholarship opportunities, specialized courses, and campus events. In the 2014–2015 academic year, 904 students were receiving either Post-9/11 GI Bill Benefits or Benefits from the DoD Tuition Assistance Program.



Entrepreneurship

MTSU is a major source of the next generation of entrepreneurs. The Tennessee Small Business Development Center and a nationally recognized Entrepreneurship program help a significant number of students and professionals start their own businesses. College exposure increases the chances individuals will start a business. A 2012 survey of MTSU associate's and bachelor's degree recipients from 2001 to 2011 revealed that five percent of respondents were self-employed.

V. Conclusion

MTSU and its affiliated activities make substantial contributions to economic prosperity across Tennessee. As this study demonstrates, MTSU fuels economic growth through knowledge creation and dissemination, human capital formation, and retaining nearly 80 percent of its graduates in the state. Given the range of MTSU's quantitative and qualitative contributions, this study's estimate of \$1.1 billion in business revenue impact barely scratches the surface of MTSU's true impact.

V. References

- Arik, Murat, and David A. Penn. Economic Contributions of Middle Tennessee State University (MTSU) to the Local Community: An Update. Murfreesboro, TN: Middle Tennessee State University, 2008.
- Bureau of Labor Statistics. www.bls.gov
- IMPLAN. www.implan.com
- Integrated Postsecondary Education Data System. www.nceds.ed.gov/ipeds/
- Middle Tennessee State University. www.mtsu.edu
- United States Census Bureau. www.census.gov

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I AM *true*
BLUE

MIDDLE TENNESSEE STATE UNIVERSITY