

The background of the image is a photograph of the Kirksey Old Main building at Middle Tennessee State University. The building is a large, multi-story brick structure with a prominent portico supported by several tall, white, fluted columns. Above the columns, the words "KIRKSEY OLD MAIN" are inscribed in a smaller font. In the foreground, a group of five students is walking across a crosswalk on a paved street. One student is walking up the steps of the building, while the others are walking away from the building. The scene is set during the day with clear skies and some trees visible on the right side of the building.

**MIDDLE
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ECONOMIC IMPACT 2022



Economic Impact

of Middle Tennessee State University on the State of Tennessee



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STUDENT UNION

Executive Summary

Embedded in the socioeconomic fabric of their communities, modern universities are increasingly expanding their roles beyond those of education and knowledge creation and dissemination. Understanding the roles of universities in their communities is the first step in properly evaluating their contributions. Commissioned by the Office of the Provost, this study updates the previous economic impact study of MTSU (2017) and analyzes MTSU's role in the Rutherford County, Nashville MSA, and Tennessee economies. This analysis highlights 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 2021:
 - 90% of the 20,857 students were from Tennessee.
 - 78% of alumni lived in Tennessee.
- ▶ MTSU plays a critical role in human capital formation in counties across Tennessee. In 2021, MTSU graduates accounted for:
 - Nearly two in every five adults with bachelor's or above educational attainment in Rutherford County
 - One in every six adults with bachelor's or above educational attainment in the Nashville MSA

II. Economic Impact

Universities are economic engines for their communities as they are instrumental in human capital formation. However, in addition to human capital formation, local spending associated with University activities is a boon to local businesses and government entities. Total economic impact of MTSU includes MTSU's payroll spending, non-payroll operating spending, construction expenditure, students' spending, and the spending associated with University visitors. According to our estimates, MTSU's total economic impact (direct, indirect, and induced) in 2021 was:

- ▶ 11,494 jobs across Tennessee
- ▶ Over \$616.8 million in wages and salaries
- ▶ \$1.428 billion in total economic activity (business revenue)
- ▶ More than \$143 million in local, state, and federal taxes

As a higher education institution, MTSU with its associated activities makes a sizable contribution to economic prosperity in the state of Tennessee, the Nashville MSA, and Rutherford County. From the individual to society and from individual businesses to the overall economy, MTSU's contributions resonate across the regional economy. With a significant qualitative impact, 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 maintains the largest number of undergraduates of the state's locally governed institutions. As a higher education institution, MTSU plays a dynamic role at the local, regional, and even state levels. The presence of 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 that MTSU plays on the economy of the community is even greater. As the second-largest employer in Murfreesboro and the third-largest in Rutherford County, MTSU employs over 2,500 individuals.¹ These employees, along with 20,857 students, have significant purchasing power in the local economy.

This study aims to answer the following questions:

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

The remainder of this report is as follows: Chapter 2 examines MTSU's role in human capital formation; Chapter 3 details the estimate of economic impact of MTSU; and Chapter 4 provides insight on MTSU and community relations.

II. MTSU and Human Capital Formation

The socioeconomic dynamics of Rutherford County, the Nashville MSA, and Tennessee as a whole are affected by the presence of MTSU. In FY 2021, the number of enrolled students at MTSU was 20,857. Of those students, 31% were from Rutherford County; 65% were from the Nashville MSA; and 90% were from Tennessee. The presence of MTSU keeps a significant portion of talent in the state. In addition to Rutherford County, Davidson, Williamson, and Wilson counties are important pipelines for MTSU students, representing about 14%, 9%, and 4% of student enrollment, respectively. (See map on page 9.) MTSU enrollment data for FY 2021 shows that MTSU's student population includes representatives of almost all counties in Tennessee.

Not only does MTSU keep talented students in the state, MTSU alumni also tend to stay in Tennessee after graduation, making the University a powerful supplier of a skilled workforce for Tennessee businesses. Of total MTSU alumni, 22% reside in Rutherford County, 56% reside in the Nashville MSA, and 78% reside in Tennessee. After Rutherford County, the most popular counties of residence are Davidson County, with 13% of all MTSU alumni, and Williamson, with 7%. MTSU alumni also reside in counties across Tennessee as shown in the map on page 9.

¹ Rutherford County Chamber of Commerce

Around 87% of the total number of enrolled Tennessee students at MTSU are from the 15 counties shown in the following table. After the top three counties (Rutherford, Davidson, and Williamson), the next group of counties contributing highest enrollment includes Wilson County (4.94%), Shelby County (4.37%), and Sumner County (2.81%).

Top 15 Tennessee Enrollment by County

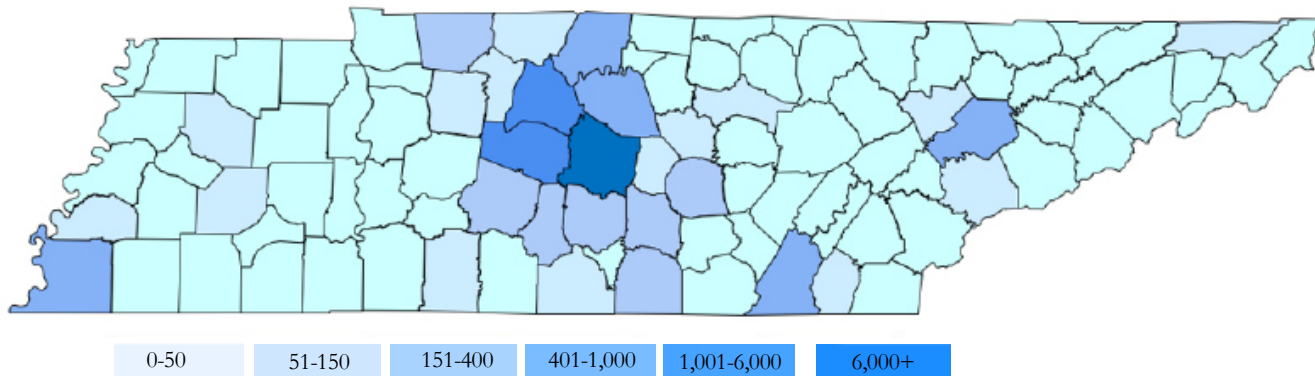
County	Number of Students	Percentage of TN Students
Rutherford	6,478	34.55%
Davidson	2,936	15.66%
Williamson	1,798	9.59%
Wilson	926	4.94%
Shelby	820	4.37%
Sumner	526	2.81%
Hamilton	423	2.26%
Knox	422	2.25%
Bedford	400	2.13%
Maury	399	2.13%
Coffee	348	1.86%
Montgomery	252	1.34%
Marshall	170	0.91%
Warren	170	0.91%
Franklin	168	0.90%
Rest of the TN Counties	2,516	13.42%
Total Tennessee Students	18,752	100.00%

Top 15 Alumni in Tennessee by County

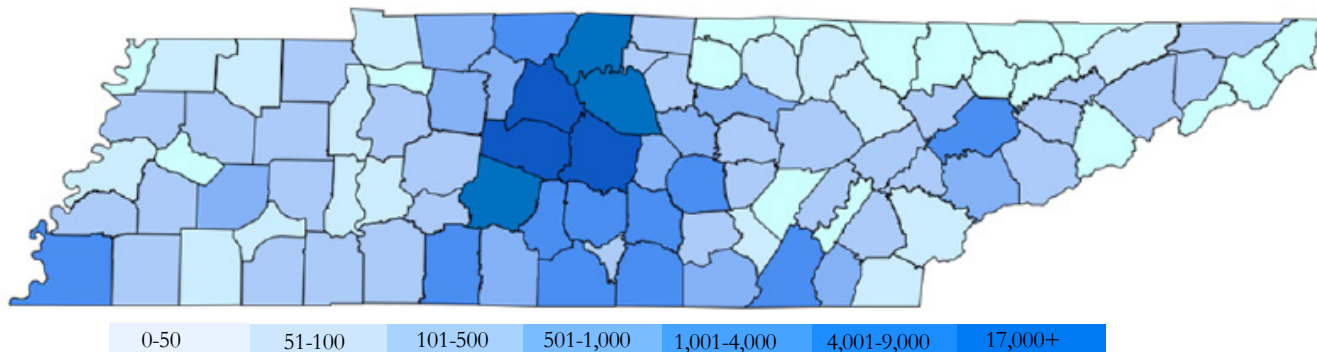
County	Number of Alumni	Percentage of TN Alumni
Rutherford	31,578	28.14%
Davidson	19,129	17.05%
Williamson	9,893	8.82%
Wilson	5,848	5.21%
Maury	4,308	3.84%
Sumner	4,306	3.84%
Coffee	3,264	2.91%
Shelby	3,035	2.70%
Bedford	2,623	2.34%
Hamilton	2,586	2.30%
Knox	2,042	1.82%
Franklin	1,387	1.24%
Marshall	1,344	1.20%
Warren	1,335	1.19%
Lincoln	1,239	1.10%
Rest of the TN Counties	18,294	16.30%
Total Tennessee Alumni	112,211	100.00%

Rutherford, Davidson, and Williamson counties are together home to about 54% of MTSU alumni in Tennessee. The next set of counties with a significant population of MTSU alumni consists of Wilson County, Maury County, and Sumner County. These three counties represent a combined 13% of the total number of alumni in the state.

Concentration of Students by County, FY 2021



Concentration of Alumni by County, 2021





MTSU Attracts and Retains Talent in the Local Community

	Educational Attainment (Population age 25 and older)			
	Rutherford County		Nashville MSA	
	2016	2020	2016	2020
Total Population Ages 25 and Older	191,596	237,642	1,251,203	1,312,544
Bachelor's and Above Degree				
Number	62,707	79,847	428,180	505,329
Percentage	32.73%	33.60%	34.22%	38.50%
Human Capital Stock				
MTSU Alumni (as of 2021)	2016	2021	2016	2021
Number	26,610	31,578	70,053	79,566
Percentage of Total Alumni	20.7%	21.8%	54.6%	55.0%
Percentage of Alumni Residing in Tennessee	26.9%	28.1%	70.7%	70.9%
Percentage of Population with Bachelor's and Above Degree	42.4%	39.5%	16.4%	15.7%
MTSU has a total of 144,758 alumni across the world, of whom 112,211 live and work in Tennessee across 95 counties.				
Human Capital Flow				
Annual Increase in Bachelor's and Above Educational Attainment (2019–2020)	Rutherford County		Nashville MSA	
Increase in the Number of Population with Bachelor's and Above Degree	5,581		25,491	
MTSU Graduates Staying in the Region	1,073		2,706	
Percentage of Increase Due to MTSU Graduates	19.22%		10.62%	
Number of Freshmen in 2021	764		1,582	
Net Local Retention of Skilled Workforce Due to MTSU	+309		+1,124	
A total of 4,920 degrees were conferred in 2020.				

Sources: MTSU Factbook, MTSU Alumni Relations, American Community Survey (2016–2020), and BERC Estimates



How does MTSU affect the regional socioeconomic dynamics?

Historically, MTSU has always played a role in creating a talent pool in the region. Over the past five years, MTSU has been successful at keeping more graduates in the region. In 2020, nearly 40% of the holders of bachelor's degrees or higher in Rutherford County were MTSU graduates. Nearly 16% of the Nashville MSA's holders of bachelor's degrees or higher were alumni of MTSU. In Tennessee, nearly one in every eight holders of a bachelor's degree or higher is an MTSU graduate.

Given the number of MTSU alumni staying in the region, MTSU's contributions to the success of the state's education policies, such as Drive to 55, are critically important. In 2019–20, the number of holders of bachelor's degree or above in Rutherford County rose by 5,581. MTSU graduates account for 19% of this group. Similarly, in the Nashville MSA, 11% of the increased number of bachelor's degree and above holders were MTSU graduates.

In terms of degree completion, as of 2020, MTSU accounts for one in every six public university undergraduate degrees in Tennessee. In terms of total undergraduate degrees (private and public universities), MTSU's share is 9.37%.





III. Economic Impact

Inputs and Assumptions

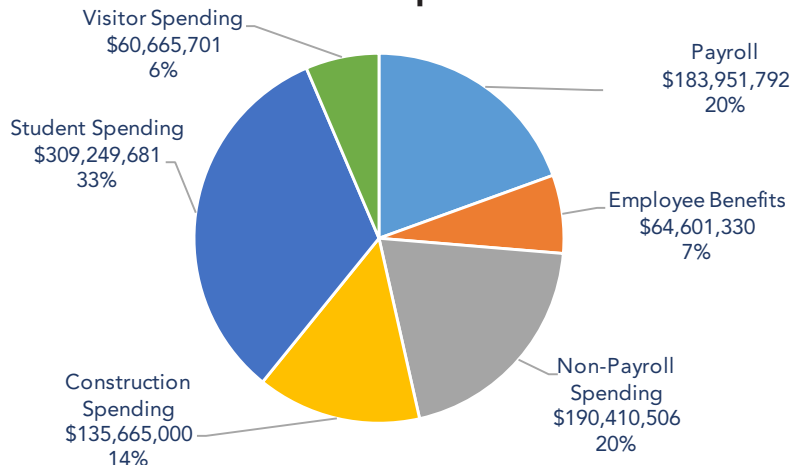
Inputs. BERC collected data on the MTSU-related revenues and expenditures from the MTSU Fact Books, published annual reports, individual departments, and the MTSU master calendar. On the input side, all MTSU-related spending amounts to \$944 million dollars in 2021. The breakdown of this spending can be seen in the table. 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 the industry standard IMPLAN² software.

MTSU-Related Expenditures, 2021

Categories	Amount
Payroll	\$183,951,792
Employee Benefits	\$64,601,330
Non-Payroll Spending	\$190,410,506
Construction Spending*	\$135,665,000
Student Spending	\$309,249,681
Visitor Spending	\$60,665,701
Total Expenditures	\$944,544,010

*Note: MTSU committed \$135,665,000 in capital spending and renovation in 2021. On average, MTSU spent \$58 million in the last three years. We used the 2021 commitment in this analysis.

Total MTSU-Related Expenditures: FY 2021



Assumptions

Payroll. Payroll spending in 2021 totaled almost \$184 million. This excludes the 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/Construction and Renovation.

Capital expenditures represent a significant part of the MTSU-related economic activities. In 2021, MTSU committed \$135,665,000 in construction and renovation. On average (over three years), MTSU spends about \$58 million annually on construction projects and renovations.

Student and Visitor. For student spending, BERC estimated spending patterns using the Cost of Attendance: Annual Estimated Budget³ as published by the University annually. The largest areas for student spending were housing, food and beverages, and transportation.

³ <http://www.mtsu.edu/tuition/cost-of-attendance.php>

Visitor Attendance Assumptions

	Day-trippers	Hotel Nights
Culture ¹	13,749	1,427
Conference ²	1,442	961
Customs and New Students ³	2,162	5,440
TSSAA ⁴ / Athletic Events ⁵	123,582	52,964
Miller/TN Livestock ⁶	11,141	45,872
Graduations	23,928	5,982
Total	176,004	112,646

We assume:

1. 95% of cultural event attendees are day-trippers, and 2% stay in a hotel.
2. 5% of conference attendees are day-trippers, and 95% stay in a hotel.
3. Local students and their families modeled as day-trippers.
4. 50% of TSSAA attendees are day-trippers, and 50% stay in a hotel.
5. 80% of attendees are day-trippers, and 20% stay in a hotel.
6. Number of events decreased to the one-third of the pre-pandemic level.

Total Attendance Data: 2020 MTSU Factbook, MTSU calendar, and departmental inquiries.

For the years considered in this study, COVID-19 had a dramatic effect on all University activities, and University events were among those most impacted. To determine campus visitor spending, BERC calculated the estimated number of visitors by using departmental inquiries, the University calendar, the 2020 MTSU Fact Book, and post-event releases. Attendance per event is based on published attendance data or published University expected attendance.

To determine the spending of these visitors, BERC used previous BERC surveys of day-tripper and overnight expenditures. These estimates were adjusted to reflect the average hotel rate in the MTSU area. The average spending per day was \$371.00 for a person staying overnight and \$107.22 for a day-tripper.

Visitor Spending Assumptions (Per Person)

	Average Spending Per:	
	Hotel Night	Day-tripper Day
Lodging	\$157.38	\$0.00
Gasoline	\$20.79	\$9.01
Restaurants	\$45.63	\$14.37
Groceries	\$27.15	\$34.87
Artwork and Craft	\$26.92	\$10.69
Shopping and Recreation	\$43.50	\$29.35
Other	\$49.63	\$8.93
Total	\$371.00	\$107.22

BERC calculated average lodging cost by surveying (online) the lodging establishments within the 10-mile radius of MTSU.



MTSU's Economic Impact by Impact Categories

The estimates in the following section are of the total impact in each of the respective impact categories. 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.

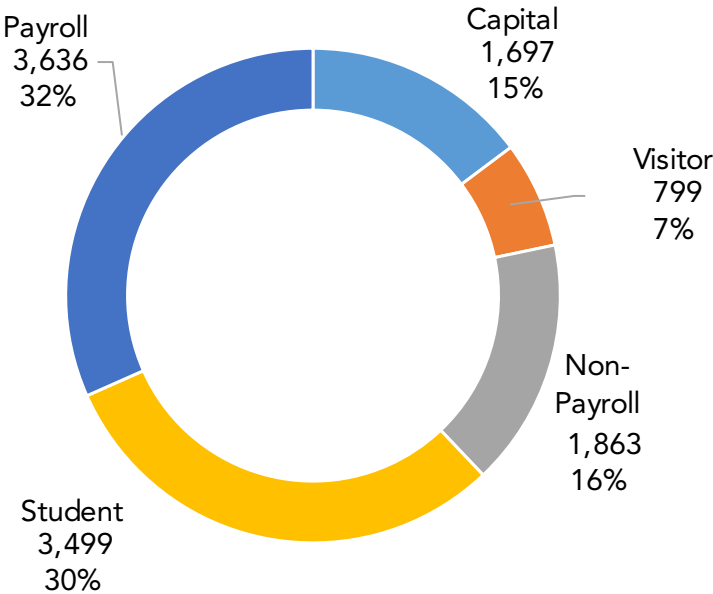


Economic Impact: Employment

In FY 2021, the total employment impact of MTSU was 11,494 jobs, of which 2,270 (FTE) were MTSU's direct employment.⁴ Payroll spending along with direct MTSU employment created more than 3,600 jobs. The second-largest employment impact comes from the student expenditures, accounting for almost 3,500 jobs. Non-payroll, capital, and visitor expenditures created 1,863 jobs, 1,697 jobs, and 799 jobs, respectively.

⁴ MTSU's total part-time and full-time employment in FY 2021 was 2,555. BERC converted 427 part-time employees to full time equivalency assuming three part-time jobs equal one full-time job.

Employment Impact of MTSU



Employment Impact of MTSU, 2021

Type of Expenditure	Amount
Capital	1,697
Visitor	799
Non-Payroll	1,863
Student	3,499
Payroll	3,636
Total	11,494

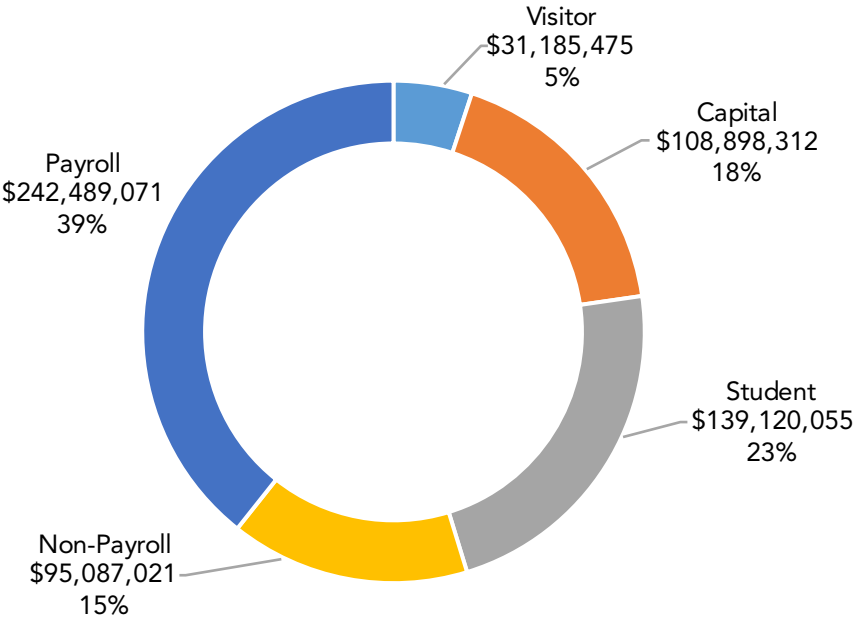
Economic Impact: Personal Income

The total personal income impact of MTSU in 2021 was almost \$617 million. MTSU payroll spending accounted for \$242 million in personal income, followed by student spending, which created a total of \$139 million in personal income. Capital, non-payroll, and visitor expenditures created personal income impacts of \$109 million, \$95 million, and \$31 million, respectively.

Personal Income Impact of MTSU, 2021

Type of Expenditure	Amount
Visitor	\$31,185,475
Capital	\$108,898,312
Student	\$139,120,055
Non-Payroll	\$95,087,021
Payroll	\$242,489,071
Total	\$616,779,934

Personal Income Impact of MTSU



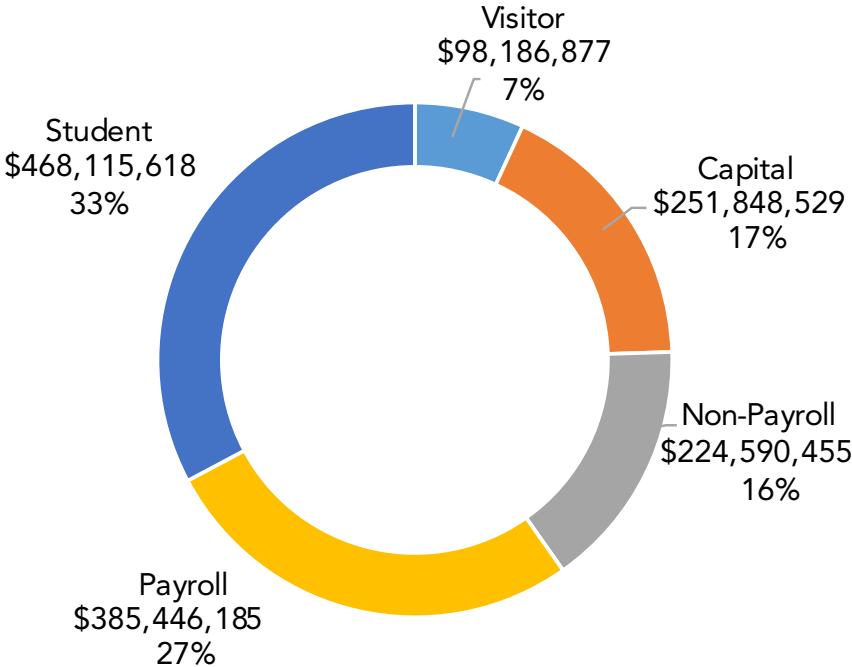
Economic Impact: Business Revenue

The combined direct, indirect, and induced impact of MTSU on business revenue in FY 2021 was \$1.4 billion. The largest sources of impact were student expenditures, creating \$468 million for the area, and payroll expenditures, creating \$385 million. The capital, non-payroll, and visitor expenditures also greatly affected the economy by creating business revenue impacts of \$252 million, \$225 million, and \$98 million, respectively.

**Business Revenue
Impact of MTSU, 2021**

Type of Expenditure	Amount
Visitor	\$98,186,877
Capital	\$251,848,529
Non-Payroll	\$224,590,455
Payroll	\$385,446,185
Student	\$468,115,618
Total	\$1,428,187,665

Business Revenue Impact of MTSU



Fiscal Impact

In FY 2021, the expenditures of the University, students, and visitors together created a total fiscal impact of over \$144 million. A majority (\$87 million) of taxes generated were federal, while \$56 million were created in state and local taxes. As displayed in the table, student spending and payroll expenses played the largest roles in tax generation.

Type of Expenditure	Fiscal Impact of MTSU, 2021				Total
	Sales Tax	Property Tax	Other Taxes/Fees	Federal Taxes	
Non-Payroll	\$3,923,061	\$1,835,837	\$1,846,874	\$18,957,309	\$26,563,081
Payroll	\$6,801,231	\$3,182,706	\$2,193,146	\$15,109,821	\$27,286,904
Capital	\$3,635,744	\$1,701,384	\$1,580,978	\$19,054,852	\$25,972,958
Student	\$13,324,387	\$6,235,284	\$4,390,308	\$27,659,683	\$51,609,662
Visitor	\$3,370,597	\$1,577,306	\$882,598	\$6,315,634	\$12,146,135
Total	\$31,055,020	\$14,532,517	\$10,893,904	\$87,097,299	\$143,578,740

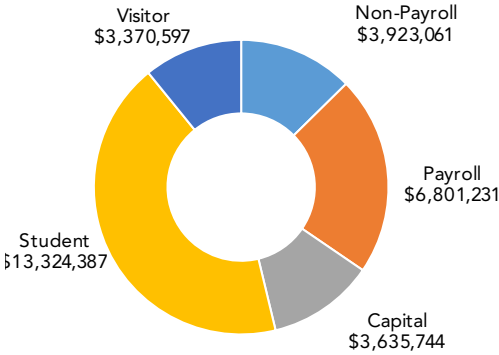
In the **sales tax** category, student expenditures represent over 42% of the total \$31 million impact. Payroll, non-payroll, capital, and visitor expenditures represent 22%, 13%, 12%, and 11%, respectively.

In the **property tax** category, 43% of the total can be attributed to student expenditures. As with sales taxes, payroll, non-payroll, capital, and visitor expenditures represent 22%, 13%, 12%, and 11%, respectively.

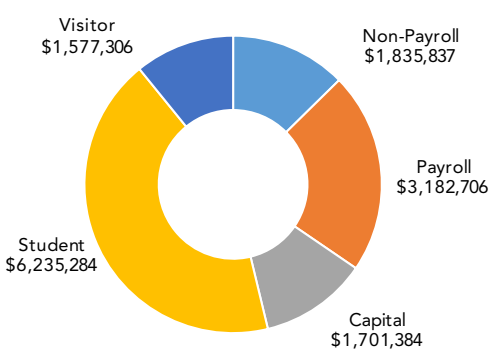
For **other taxes and fees**, student expenditures represent about 40% of the total. Payroll, non-payroll, capital, and visitor spending constitute 20%, 17%, 15%, and 8%, respectively.

For **federal taxes**, student expenditures represent 32% of total, with capital (21.8%), non-payroll (21.7%), payroll (17%), and visitor (7%) following.

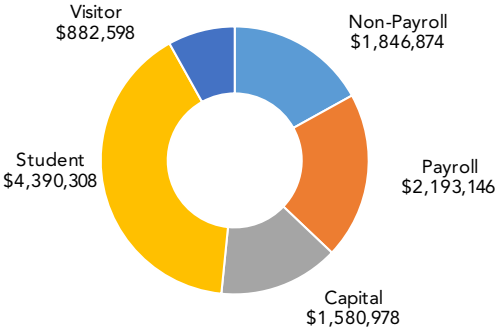
MTSU Impact in 2021: Sales Taxes



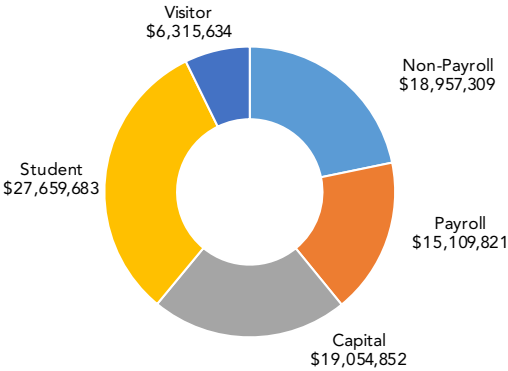
MTSU Impact in 2021: Property Taxes



MTSU Impact in 2021: Other State/Local Taxes/Fees



MTSU Impact in 2021: Federal Taxes





IV. MTSU & Community Relations

First-Generation Students. MTSU prides itself on creating resources and opportunities for first-generation college students to graduate. The Scholars Academy program was created to serve the needs of first-generation and/or Pell-eligible students. The program begins with a two-week summer institute before the freshman semester and offers a special section of UNIV 1010 to give students a strong start to their university careers. TRiO Student Support Services is a federally funded program at MTSU designed to work with first-generation, income-eligible students. Both of these programs demonstrate the University's dedication to first-generation students. According to the MTSU Graduating Senior Survey in 2021, about 41% were first-generation, Pell-eligible graduates.

Adult Learners. According to the Tennessee Higher Education Commission, MTSU has one of the largest headcounts of adult learners among the state's public universities. Of the total University student body, 24% of students are adult learners. Additionally, over 28% of undergraduate completion in the 2020–21 academic year represents adult learners. This rises to 81% for graduate completions. The adult learner population is essential to MTSU's campus. Special scholarships and supports like the June Anderson Center for Women and Nontraditional Students help provide students with the financial and personal resources they need to succeed.

Veterans. In 2021, Military Times ranked MTSU eighth “Best for Vets” of the 38 ranked institutions in the region (Appalachia). MTSU's Charlie and Hazel Daniels Veterans and Military Family Center was the first Vet Success on Campus (VSOC) program in Tennessee. The purpose of this facility 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 the success of student veterans through initiatives such as scholarship opportunities, specialized courses, and campus events. Nearly 4% of MTSU's 2021 graduates were veterans, with veteran dependents representing about 2%.

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 working professionals start their own businesses. Further, college exposure increases the chances that individuals will start a business in the community. In 2012, a survey was administered to MTSU associate and bachelor's degree recipients from the years 2002 to 2011. Of those who responded, about 5% were self-employed.

V. References

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The image shows the front entrance of a brick building at Middle Tennessee State University. The entrance features a curved portico supported by white columns and large glass doors. Two students with backpacks are walking on the sidewalk in front of the building. A large blue graphic overlay covers the left side of the image, containing the text 'I AM true BLUE' and 'MIDDLE TENNESSEE STATE UNIVERSITY'.

I AM *true*
BLUE

MIDDLE TENNESSEE STATE UNIVERSITY