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Cumberland University in Wilson County
Economic & Fiscal Impact



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JONES COLLEGE OF BUSINESS

Business and Economic Research Center

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Executive Summary

Universities play critical roles in their regions as operating institutions and as part of knowledge infrastructures. The role of universities has become even more important as the knowledge economy has transformed economic dynamics. Three of the critical elements of the knowledge economy closely associated with institutions of higher education that have been found to be significant determinants of regional competitiveness are the creation of human capital, promotion of social capital, and strategic partnership with regional stakeholders.

Traditional economic impact analyses often quantify the local expenditures associated with university-related activities. The Business and Economic Research Center (BERC) in the Jennings A. Jones College of Business at Middle Tennessee State University, in cooperation with Cumberland University (CU), compiled detailed information regarding CU-related expenditures in Wilson County. The three major areas considered for CU's economic impact are university operations (operating expenditures and salaries), student expenditures, and visitor expenditures. BERC constructed a regional model for Wilson County using IMPLAN to capture Cumberland University's economic impact.

Key Findings of the Cumberland University Impact Study.

Wilson County. The contribution of CU-related economic activities to Wilson County is estimated at

- o \$123.5 million in business revenue
- \$42.48 million in wages and salaries
- o 1,092 jobs
- \$5.74 million in state and local taxes

These economic impact figures, along with data about socioeconomic dynamics, indicate that Cumberland University is an important asset to the economy of Wilson County.

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Education is one of the most important factors in the present-day economy. Colleges and universities have a responsibility to prepare humans for the future as efficiently as possible. Higher education institutions should provide high-paying employment opportunities, which will, in turn, attract and retain talent in the community. These institutions must appeal to youth, impart entrepreneurial skills, train individuals to work toward higher earnings, and ultimately become both a source of and vehicle for the dissemination of knowledge. Universities that accomplish these goals are the most beneficial for the region's competitiveness. They deliver a strong incentive for potential businesses to emerge, improve cultural diversity, and are a catalyst for overall efficiency. Cumberland University seeks to ensure success both inside and outside the classroom. Historically, Cumberland University has been proven to have a significant economic impact on surrounding communities.

Founded in 1842 by the Cumberland Presbyterian Church, Cumberland University has been a crucial factor in the competitive and transformative development of both the city of Lebanon and Wilson County in Tennessee. The University comprises the historical campus in Lebanon and three branches: the McFarland Hall site in Lebanon; the Mt. Juliet Center, known for the School for Online and Professional Studies in Mt. Juliet, Tennessee; and the Athletic Complex, home to both the Bulldog football program and multiple athletic training facilities, in Lebanon. The University offers more than 80 majors, 36 minors, and pre-professional programs plus thirteen graduate-degree programs, with a total of 3,072 students in 2023. The 2023 student enrollment marks a record highest in the 182-year history of the university, with an 18.7 percent increase from the 2,588 students in 2022. This independent liberal arts university has substantially affected the economy through its operating expenditures, payroll, student spending, and visitor expenditures. Cumberland University's economic impact extends beyond the monetary figures: it is a primary source of the skilled workforce in the county.

This study aims to analyze the role of Cumberland University in the economy of Wilson County. To that end, the study begins by underlining critical CU activities that promote economic development. An input-output model, IMPLAN, is used to measure the economic impact of CU activities using a quantitative method. CU's operations are counterfactually removed to better understand the significance of the loss the regional economy would suffer if operations ceased to exist. There are numerous tangible and intangible benefits emanating from CU, and we were especially attentive in estimating our inputs to avoid double counting. Thus, our estimates should be considered conservative.

The ultimate question many university impact studies seek to answer is: Who benefits from the university? Universities, both public and private, provide benefits directly or indirectly to all sectors of life in a society. In a competitive global economy, knowledge is critical to economic growth and distinguishes one society from another. Generating and acquiring this knowledge creates substantial spillovers or positive externalities that benefit society as a whole.¹

Many studies have identified various impacts of universities on different segments of society. Some of the prominent beneficiaries are:

- (1) individuals who can increase their lifetime earnings substantially with an additional degree or gain entrepreneurship skills to start their own businesses.
- (2) firms that can increase their productivity by encouraging and providing financial support to employees to earn additional degrees and thus reduce their on-the-job training expenses.
- (3) governments that can benefit from higher earnings of the skilled workforce and increased tax collections due to expenditures of these institutions, their employees, and their students; and
- (4) local economies that benefit from the presence of these institutions, which generate economic activity that creates jobs, increases entrepreneurship and provides a highly skilled workforce attracting new and relocated firms.

From a broader perspective, higher education institutions have been considered an engine of economic growth in a community, promoting and sustaining a competitive regional economy. With the steadily increasing popularity and utility of a college degree, economic researchers over the years have also become more interested in quantifying the effect of higher education institutions on the economy. Regardless of scale, university impact studies almost universally conclude that institutions of higher learning make a positive net contribution to the economy.

According to the 2022 Tennessee Independent Colleges and Universities Association (TICUA) report, the 34 TICUA member institutions have generated more than 21,000 employment opportunities in the Tennessee economy with 78,000+ students (TICUA 2022). This shows the importance of private universities such as Cumberland University as economic drivers in their communities. Other states also have executed studies for private college and university associations and organizations, such as the Association of Independent Kentucky Colleges and Universities (AIKCU) and North Carolina Independent Colleges and Universities (NCICU)¹. AIKCU found that their 18 members added more than \$850 million to the local economy each year, while NCICU's 36 members added \$14.2 billion in FY 2012–2013 (AIKCU, 2020; EMSI, 2015).

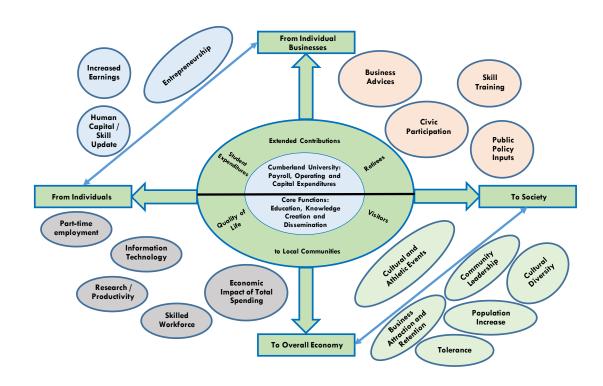
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¹ For a detailed discussion of these issues, see Fred Carstensen, Stan McMillen, and Murat Arik, *The Economic Impact* of Continuing Operations of the University of Connecticut (Storrs, CT: Connecticut Center for Economic Analysis at the University of Connecticut, 2003).

In order to analyze the impact of Cumberland University, we looked for similar studies done for private colleges and universities. One example was a study of Warren Wilson College, a small, private school in North Carolina with an enrollment of around 900 students. In 2015, its total economic impact on the region was \$38.8 million (EMSI, 2015). Dickinson College in Carlisle, Pennsylvania, has an enrollment of 2,364 students and is one of several colleges in Cumberland County. Its total economic impact on the county was nearly \$55 million in 2010 (Bellinger et al., 2010). Both studies broke down the impact by operations, student spending, visitor spending, and alumni impact, the same method by which we are analyzing the impact of CU.

In addition, several studies have focused on a local university's cultural and community impact. For example, Wright State University, a public university in Dayton, Ohio, engaged a pool of community volunteers to assist in five core initiatives. Efforts to foster economic and creative growth in the city included educating, engaging, and enabling the community to get involved in the initiatives. The university was also important to the culture and entertainment industry in Dayton. Lectures, concerts, athletic events, and theatrical performances hosted more than 500,000 attendees, adding tens of millions of dollars to the local economy (Creighton, Sweeney, and Cauley, 2010). A recent impact study of Wright State University (2023) points out that the University, in the 2021-22 fiscal year, has generated \$2.3 billion in added income for the Raiders country area economy, which included 16 counties in the West Ohio region.

Consider the following illustration.



Considering the range of Cumberland University activities presented, any measure of the University's impact on the local community could only lead to an underestimation. Even as we recognize the broader roles of universities, such as (1) providing a better-educated workforce, (2) increasing productivity through professional development and lifelong learning courses, (3) serving the public through applied research, (4) providing leadership to the business community, and (5) improving quality of life through the cumulative effect of all activities cited above, we nevertheless must confine ourselves to an assessment only of the impacts of university spending, payroll, visitors' spending, and students' spending.

Before discussing methodology and economic impact assumptions, we would like to examine the relationship between Cumberland University and Wilson County.

Cumberland University plays an important role in the regional economy through its spending and related activities and the broader contribution of CU to regional socioeconomic dynamics. A glance at regional socioeconomic dynamics and rankings of the region by nationally recognized studies and publications reveals that the Nashville MSA, which includes Wilson County and surrounding areas, has undergone a significant transformation in the past few years, growing exponentially and receiving national recognition on multiple fronts. For example, the Nashville MSA ranks top in Policom's 2023 Economic Strength Index, which measures the economic vitality of the nation's 384 metropolitan statistical areas. The Nashville MSA was also found to be the fastest-growing large metro economy in 2021 by data analytics company Stessa. In addition, the Nashville MSA, to which Wilson County contributes, was ranked eighth in the Milken Institute's 2021 Best-Performing Cities index, which ranks U.S. metropolitan areas by how well they create and sustain jobs and economic growth.

Due to the COVID-19 pandemic, the region experienced a decline in employment. However, Wilson County has grown at a significantly faster rate than the state of Tennessee and Nashville MSA in the areas of population and labor force.

Between 2020 and 2022, Wilson County experienced a six percent population growth and nearly five percent growth in its labor force, while the state of Tennessee experienced nearly a two percent population growth and only one percent labor force growth. The differences in the growth figures suggest Wilson County is growing higher than the state in both categories.

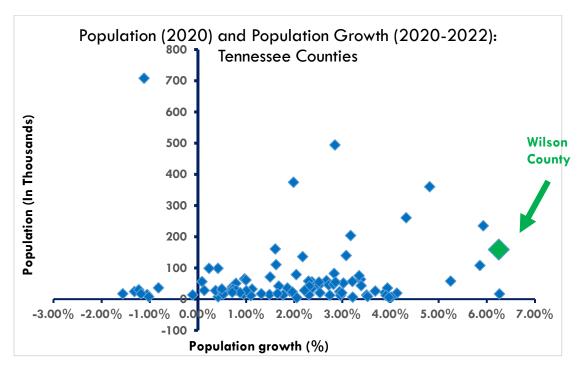
Employment, Labor Force, and Population Dynamics in Wilson Country and Surrounding Areas (2020-2022)

30110011ding Areas (2020-2022)									
Population	2020	2021	2022	Growth					
Wilson County	148,645	152,010	158,555	6.25%					
Nashville MSA	2,021,650	2,036,289	2,072,283	2.44%					
Tennessee	6,925,619	6,968,351	7,051,339	1.78%					
Labor Force				-					
Wilson County	77,975	79,498	81,932	4.83%					
Nashville MSA	1,077,513	1,096,505	1,125,729	4.28%					
Tennessee	3,303,230	3,323,545	3,352,030	1.46%					
Employment				-					
Wilson County	73,013	76,809	79,774	8.48%					
Nashville MSA	1,001,601	1,054,717	1,094,850	8.52%					
Tennessee	3,056,709	3,174,135	3,238,559	5.62%					

Source: Bureau of Labor Statistics, Census Bureau, Tennessee State Data Center, University of Knoxville

^{*}Not Seasonally Adjusted

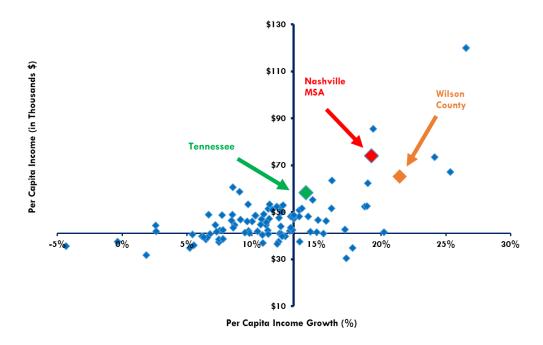
As seen in the graph below, Wilson County has experienced significant population growth compared to other counties in Tennessee. From 2020 to 2022, the population in Wilson County increased at an above-average rate of more than six percent. Based on the data from the graph, Wilson County stands out as the fastest-growing county in the state of Tennessee.



Source: Tennessee State Data Center, University of Tennessee at Knoxville

How does per capita income in Wilson County, Nashville MSA, and Tennessee compare? The graph below illustrates the comparison. As displayed, per capita income (2022) and per capita income growth rates (2020–2022) intersect at the state averages. Compared with other counties in Tennessee, Wilson County has an above-average per capita income.

Per Capita Income (2022) and Income Growth (2020-2022): Tennessee Counties and Nashville MSA



Source: Bureau of Economic Analysis

Where does Cumberland University fit into these growth dynamics? According to CU data, the University has experienced growth every year since 2009. CU initiated a major capital campaign between 2012 and 2013, successfully completing a 152-bed residence hall, a new online campus, a new Learning Commons, and new off-campus facilities (home to online learning, nursing, criminal justice, health professions, business, and the Master of Science in Public Service Management). Between 2012 and 2013, the University allocated nearly \$9.5 million for new construction and expansions. CU expanded its regional outreach through a new off-campus facility in Mount Juliet and by joining 12 new business board memberships since 2006, for a total of 60 as of 2021. As the table below clearly indicates, these improvements represented a significant increase in CU's enrollment: 1.49 percent between 2019 and 2022. Concurrent with CU's enrollment increase, the number of degrees awarded rose to 654 in 2022, around a 6.34 percent increase from 2019. The increase in the skilled labor force due to CU is a bonus to the community, as a skilled labor force is considered a major factor in attracting and retaining businesses in a region.

Cumberland University: Enrollment and Degrees Awarded

Enrollment (Fall Term)	2019	2022	% Change
Undergraduate	2,279	2,311	1.40%
Graduate	271	277	2.21%
Full-Time	1,880	1,946	3.51%
Part-Time	670	642	-4.18%
International	150	153	2.00%
Online	59	87	47.46%
Total	2,550	2,588	1.49%
Degrees Awarded	2019	2022	
Associate	164	237	44.51%
Bachelor's	274	276	0.73%
Master's	1 <i>77</i>	141	-20.34%
Total Degrees	615	654	6.34%

Source: TICUA Factbook, IPEDS, and Cumberland University

Cumberland University Student Enrollment (2006 -2022)

2500

2500

1500

0

2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

Year

Source: Cumberland University Data

Understanding that the majority of CU alumni live and work either in Wilson County or nearby counties, CU positively contributes to the human capital formation of the Nashville MSA and the state of Tennessee. As seen from the following table, the number of bachelor's degree holders or above has been on the increase since 2020 for both Wilson County and Nashville MSA alongside the state of Tennessee.

CU Attracts and Retains Talent in the Local Community

		I	Educational Att	ainment (Popul	ation Ages 2	5 and over)
	Wilson County Nashville MSA Tennessee					
	2020	2022	2020	2022	2020	2022
Total Population Ages 25 and Over	96,648	109,758	1,289,085	1,402,488	4,649,847	4,868,110
Bachelor's and Above Degree						
Number	33,591	39,370	480,773	<i>5</i> 76 , 534	1,308,972	1,513,960
Percent %	34.8%	35.9%	37.3%	41.1%	28.2%	31.1%

Source: Census Bureau

IV.A. Concept of Economic Impact

Local business revenue, personal income, and employment are all greatly impacted by university-related spending. An example of this going around a sequence of spending is a university's expenditure on goods and services that cause companies to purchase inputs, including labor, machinery, and other supportive materials, to produce adequate output to meet demand. That is how initial university expenditures eventually work their way through the local economy.

The round-by-round effect on the economy that exemplifies the multiplier process becomes marginally smaller with every round, specifically due to leakage from the spending stream. These leakages are produced by expenditures for goods or services that are not manufactured within the local economy. When a university purchases personal computers from a company in Los Angeles, there is no economic impact on the local economy aside from the necessary delivery services.

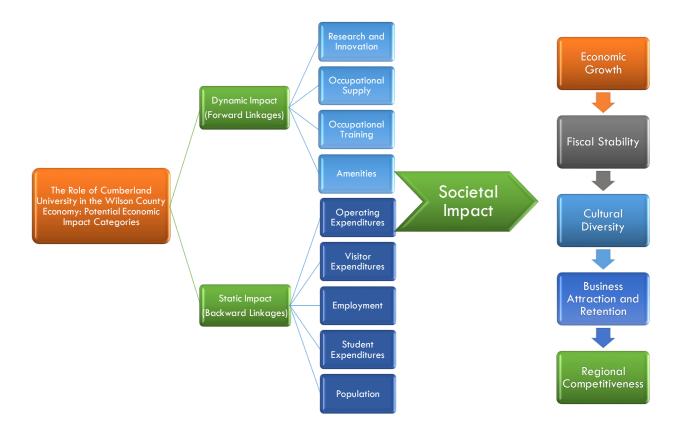
Multipliers are used in order to estimate the sum of the round-by-round effects of spending. Normally, three effects are estimated by multipliers: direct, indirect, and induced. The direct effect computes the initial change in expenditure. The indirect effect measures the sum of the round-by-round effect increases in business spending for inputs, excluding labor. Finally, the induced effect deals with the sum of the round-by-round increases in employee spending caused by increased payrolls and household incomes.

IV.B. Economic Impact Model and Modeling Approach

Economists often use IMPLAN (Impact Analysis for Planning) software to estimate the types of multipliers discussed above for local economies. Initially developed by the U.S. Forest Service, a private research company maintains and sells this software package. Our model uses IMPLAN to estimate Cumberland University's impact, investigating the effects of CU by counterfactually removing it from the local economy.

IV.C. Conceptual Framework

This study's approach is structured around a conceptual model that treats CU as an economic entity within the Wilson County economy. The presence of CU radiates a substantial economic impact across the area. This conceptual framework, exhibited below, outlines some of the various sectors of the CU community that affect the local economy.



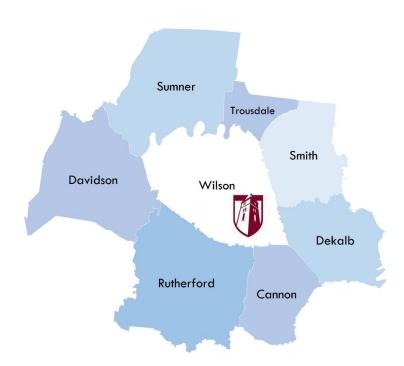
How do the CU activities in this broader framework convert into economic and societal impact? We briefly address some of the components of dynamic impact indicated above. Our objective is to quantify four of the five static impact categories listed: operating expenditures, employee spending, visitor expenditures, and student expenditures. The following sections provide a detailed explanation of expenditure estimates. Significantly, we used conservative assumptions to avoid any potential double counting for each of the categories we undertook to quantify. For example, when evaluating visitor spending for this study, we only used data on visitors that could be accessed from various available CU sources across this study.

A number of assumptions were developed to guide the assessment of CU's economic impact on the region. Some general assumptions apply to all categories of economic impact, while others are category specific. We emphasize that these assumptions determine the scope of economic impact and help us avoid double-counting some CU-related spending.

V.A. General Assumptions

Study region. A critical aspect of any economic impact analysis is the identification of a meaningful boundary for the study area: county, MSA, state, or economic region. Once the study region is identified, assumptions regarding the impact of expenditures may be developed. After identifying the study region, the next step is constructing the area model using IMPLAN.

 With regard to the economic impact of CU, BERC constructed a regional model consisting of Wilson County.



Counterfactual removal of CU. Since CU-related activities have already been embedded in the baseline regional economy, the only way to determine the university's impact is to remove it from the baseline economy.

Non-substitutability of CU. This study assumes no academic institution in the predefined study area can substitute for the programs offered by CU.

 Therefore, all students attending CU are assumed to be either: 1) net new to the county or 2) recaptured if the students' home is in the county.

Out-of-region purchases. All transactions with vendors outside the predefined study region are excluded from the economic impact calculations.

Household income adjustment. Employees' household income is adjusted for federal taxes and other deductions. Only disposable income is used to calculate the economic impact of household spending.

Campus visitors. BERC used some general assumptions about event attendees and their expenditures to calculate the economic impact of campus visitors. The visitor expenditure estimates reflect minimum visitor spending in the study region.

V.B. Cumberland University: A Snapshot

Unless otherwise noted, the economic impact assessment in this analysis is for FY 2023. The basic parameters that guide this analysis are given below:

- \$32.40 million in operating expenditures
- \$2.3 million in maintenance/plant operations expenditures
- \$1.15 million in capital expenditures in Technology and Equipment
- \$4.08 million in Construction Spending (3-year Average)
- \$13.53 million in payroll, excluding wages associated with the student workers
- 2,588 student enrollments in 2022
- 50,281 visitors spending \$22.88 million

V.C. Cumberland University as an Operating Institution

Noncapital operating expenditure. Like any business, CU's operation results in a substantial amount of spending on goods and services. In FY 2022, CU's total noncapital operating expenditures, excluding payroll, were \$34.70 million. Without vendor zip-code data, BERC used the IMPLAN model's default expenditure function for higher education institutions to estimate the local portion of CU's noncapital operating expenditures.

Capital expenditure. In addition to noncapital operating expenditures, CU's annual capital expenditures are substantial, estimated at \$4.08 million (3-year Average). However, only a fraction of these expenditures is spent in the study region.

Employment. CU is a major employer in Wilson County. Excluding student workers and graduate assistants for the purposes of this study (because their spending is treated under student expenditures), CU employs 260 faculty and 156 staff for a total direct employment of 416.

Cumberland University Employees (FY 2022)

Туре	Number
Full-Time/Part-Time Faculty	260
Full-Time/Part-Time Staff	156
Total Direct Employment	416

Source: Cumberland University

V.D. Cumberland University as Magnet for a Transient Population

CU has experienced phenomenal growth in enrollment in the past seven years. The immediate impact of this growth is the increase in the population of the study area. Furthermore, these students bring sizable spending power to the community and serve as a labor force for many retail-sector employers as they work part-time at local businesses.

In any economic impact study of higher education institutions, student expenditures represent a substantial portion of the overall impact. A clear definition of the study region determines the extent of the impact of student expenditures. Expanding the region may reduce the impact of student expenditures since the expanded region is more likely to include other higher education institutions, thereby increasing the rate of substitutions of programs for students in the region.

A profile of student living situations is shown in the following table. Total student enrollment in 2022 is 2,588 of which BERC assumes 1145 reside with family and friends, 471 live on-campus, 771 commute to campus, and 201 live off-campus.

Cumberland University Enrollment Figures by Type (FY 2022)

Туре	Number
Staying with Family and Friends	1,145
Commuters	<i>77</i> 1
Off-Campus Residents	201
On-Campus Residents	471
Total	2,588

Source: Cumberland University

Using average student expenditure data from BERC's survey of higher education institutions in middle Tennessee and the total cost of attending CU in 2022, we calculated per capita expenditures by expenditure type for each category of students. According to these estimates, on average, a student staying off-campus spends \$20,041, commuting students \$12,769, on-campus residents \$8,691², and students with family and friends \$6,199. A detailed profile of student

 $^{^2}$ To avoid possible double-counting, BERC excludes on-campus housing as an expenditure since it is included in university revenue.

expenditures by student category and expenditure type, as well as total spending, is displayed in the following table.

Cumberland University: Per Capita Student Expenditure (FY 2022)

Spending Category*	On-Campus	Commuters	Family and Friends	Off-Campus
Housing	\$0	\$0	\$0	\$6,051
Household Operation	\$0	\$0	\$0	\$1,424
Other Durables	\$0	\$0	\$0	\$732
Food and Beverages	\$3,064	\$3,970	\$0	\$3,393
Vehicles and Parts	\$957	\$1,206	\$1,270	\$1,270
Transportation	\$1,690	\$2,130	\$2,130	\$2,130
Clothing and Shoes	\$460	\$1,234	\$0	\$915
Other Services	\$692	\$1,854	\$1,599	\$1,690
Computer and Furniture	\$269	\$722	\$0	\$760
Medical Care	\$359	\$452	\$0	\$476
Books	\$1,200	\$1,200	\$1,200	\$1,200
Total	\$8,691	\$12,769	\$6,199	\$20,041

^{*}Ratios are calculated from a BERC survey of higher education institutions in Middle Tennessee.

Total student expenditure is estimated at around \$25.06 million in Wilson County. A substantial portion (\$9.85 million) of this spending can be attributed to commuter students, \$7.1 million to students living with family and friends, and the rest to those living on and off campus.

Cumberland University: Total Student Expenditure (FY 2022)

Spending Category*	On-Campus	Commuters	Family and Friends	Off-Campus	Total
Housing	\$0	\$0	\$0	\$1,216,273	\$1,216,273
Household Operation	\$0	\$0	\$0	\$286,221	\$286,221
Other Durables	\$0	\$0	\$0	\$147,149	\$147,149
Food and Beverages	\$1,443,287	\$3,060,881	\$0	\$682,039	\$5,186,207
Vehicles and Parts	\$ <i>45</i> 0, <i>7</i> 13	\$930,120	\$1,453,858	\$255,219	\$3,089,910
Transportation	\$795 , 990	\$1,642,230	\$2,438,850	\$428,130	\$5,305,200
Clothing and Shoes	\$216,667	\$951,602	\$0	\$183,827	\$1,352,096
Other Services	\$325,966	\$1,429,790	\$1,830,692	\$339,709	\$3,926,158
Computer and Furniture	\$126,679	\$556,958	\$0	\$152,826	\$836,462
Medical Care	\$169,162	\$348,496	\$0	\$95,625	\$613,284
Books	\$565,200	\$925,200	\$1,374,000	\$241,200	\$3,105,600
Total	\$4,093,664	\$9,845,278	\$7,097,400	\$4,028,218	\$25,064,560

^{*}Ratios are calculated from BERC survey of higher education institutions in middle Tennessee.

V.E. Cumberland University as Visitor Attraction Center

One of the quite significant but often highly underestimated aspects of a university's economic impact is spending by the university's visitors. Every year, a substantial number of people visit universities for any one of the following reasons: cultural events, business events, conferences, athletic events, family visits, and other departmental visits. Many visitors to the campus are from outside the region, and their spending is net new to the area.

Based on the figures supplied by CU, BERC estimated that 50,281 people visited Cumberland University in 2022, of which 43,055 are assumed to be net new day-trippers and 7,226 are assumed to have stayed overnight, generating 23,125 hotel nights.

Cumberland University: Visitor Type (FY 2022)

Type of Visitors	Day-trippers	Overnight	Hotel Night	Total Attendance	Total Trip Day
Student Orientation + Campus Tours*	755	618	1,977	1,373	2,732
Athletics**	36 , 575	1,925	6,160	38,500	42,735
Business and Cultural*	5,724	4,684	14,988	10,408	20,712
Total	43,055	7,226	23,125	50,281	66,179

stAssuming that 55% of visitors under this category are day-trippers and 45% stay an average of 3.2 nights

However, estimating the number of visitors is only one of the challenges in estimating the economic impact of CU visitors. Identifying how much these visitors spend is a critical yet difficult task. Ideally, a survey of campus visitors during an event would provide important generalizable clues for other events. In this study, BERC estimated the percentage of spending by category from a variety of BERC visitor surveys, including those from the Bureau of Census and the Tennessee Department of Tourist Development.

Per capita CU visitor expenditures by expenditure type and visitor category (day-trippers and overnight visitors) can be seen in the following table. The average day-tripper spends \$302.69, and those staying in a hotel spend \$425.66 per day. Total CU visitor expenditures are estimated at around \$22.88 million, of which day-trippers account for \$13.03 million and overnight visitors \$9.84 million.

^{**}Assuming that 5% of visitors stay overnight and 95% are day-trippers. Overnight individuals spend 3.2 days on average Sources: BERC Calculations, Tennessee Department of Tourist Development (TDTD) Data

Cumberland University: Total Visitor Spending (FY 2022)

	Average Spending Per Hotel Day	Average Day-tripper Spending	Total Spending of Overnight Visitors	Total Day-tripper Spending	Total Visitor Spending
Lodging	\$122.97	\$0.00	\$2,843,636.98	\$0.00	\$2,843,636.98
Gasoline	\$99.32	\$99.32	\$2,296,739.24	\$4,276,1 <i>77</i> .91	\$6,572,917.15
Restaurants & Bars	\$112.00	\$112.00	\$2,589,959.68	\$4,822,109.60	\$7,412,069.28
Groceries, Take-out Food/Drink	\$39.35	\$39.35	\$909,954.58	\$1,694,196.54	\$2,604,151.13
Clothing	\$14.02	\$14.02	\$324,207.45	\$603,624.79	\$927,832.24
Sporting goods	\$14.44	\$14.44	\$333,919.80	\$621,707.70	\$955,627.50
Souvenirs & Other Expenses	\$23.56	\$23.56	\$544 , 816.52	\$1,014,365.20	\$1,559,181.72
Total Estimated Visitor Spending	\$425.66	\$302.69	\$9,843,234.26	\$13,032,181.74	\$22,875,416.00

Sources: BERC Calculations, Tennessee Department of Tourist Development (TDTD) Data

VI.A. Economic Impact of CU's Operation (Noncapital Operating, Capital, and Payroll)

CU annually injects \$39.92 million into Wilson County through noncapital operating, capital, and payroll expenditures. As the table below indicates, in FY 2022, these direct expenditures generated:

- \$60.04 million in Wilson County in total business revenue
- \$25.03 million in the county in personal income
- o 658 jobs in the county
- o \$1.98 million in state and local taxes

Economic Impact of Cumberland University
Payroll, Capital, and Noncapital Operating Expenditures (FY 2022)

Туре	Direct	Indirect	Induced	Total
Employment	542	64	52	658
Personal Income	\$19,693,494	\$2,843,91 <i>7</i>	\$2,488,820	\$25,026,231
Business Revenue	\$39,915,649	\$8,656,995	\$11,462,682	\$60,035,326
Estimated State and Local Taxes	N/A	N/A	N/A	\$1,976,602

Source: BERC Calculations, IMPLAN Data

VI.B. Economic Impact of CU's Student Expenditures

Direct expenditure of CU students in FY 2022 is estimated at nearly \$25 million in Wilson County. The total economic impact of CU students on the county in 2022 is estimated at:

- \$33.70 million in business revenue
- \$10.49 million in personal income
- o 247 jobs
- \$1.9 million in state and local taxes

Economic Impact of Cumberland University

Student Expenditures (FY 2022)

Туре	Direct	Indirect	Induced	Total
Employment	199	26	22	247
Personal Income	\$7,849,866	\$1 , 557 , 427	\$1,082,862	\$10,490,155
Business Revenue	\$25,064,560	\$4,865,888	\$3,768,778	\$33,699,226
Estimated State and Local Taxes	N/A	N/A	N/A	\$1,903,535

VI.C. Economic Impact of CU's Visitor Spending

In FY 2022, CU visitors spent \$23 million directly in Wilson County. The total economic impact of CU visitors in FY 2022 is estimated at:

- o \$29.77 million in business revenue
- o \$6.96 million in personal income
- o 187 jobs
- \$1.86 million in state and local taxes

Economic Impact of Cumberland University

Visitor Spending and Expenditures (FY 2022)

Туре	Direct	Indirect	Induced	Total
Employment	146	27	14	187
Personal Income	\$4,849,033	\$1,420,576	\$694,433	\$6,964,042
Business Revenue	\$22,875,416	\$4,474,892	\$2 , 415 , 587	\$29,765,895
Estimated State and Local Taxes	N/A	N/A	N/A	\$1,862,882

Source: BERC Calculations, IMPLAN Data

VI.D. Total Economic Impact of CU

The total economic impact of CU includes the sum of the economic impacts in the four major categories presented above. According to estimates in the following table, CU's total economic impact on Wilson County in FY 2022 is

- o \$123.5 million in business revenue
- o \$42.48 million in personal income
- o 1,092 jobs
- \$5.74 million in state and local taxes

Economic Impact of Cumberland University

Total Economic Impact (FY 2022)

		· · · · · · · · · · · · · · · · · · ·		
Туре	Direct	Indirect	Induced	Total
Employment	887	117	88	1,092
Personal Income	\$32,392,393	\$5,821,920	\$4,266,115	\$42,480,428
Business Revenue	\$87,855,625	\$1 <i>7</i> ,997,775	\$17,647,047	\$123,500,447
Estimated State and Local Taxes	N/A	N/A	N/A	\$5,743,019

VI.E. Fiscal Impact of CU

The activities associated with Cumberland University also benefit local and state governments through taxes and fees. In FY 2022, CU-related activities account for \$971.69 thousand in property taxes, \$3.67 million in sales taxes, and \$1.1 million in other taxes and fees. The total fiscal impact is estimated at \$5.74 million.

Cumberland University: Fiscal Impact (FY2022)

	<u> </u>
Property Tax	\$971,692
Sales Tax	\$3,672,136
Other Taxes and Fees	\$1,099,429
Total Local and State Taxes and Fees	\$5,743,257

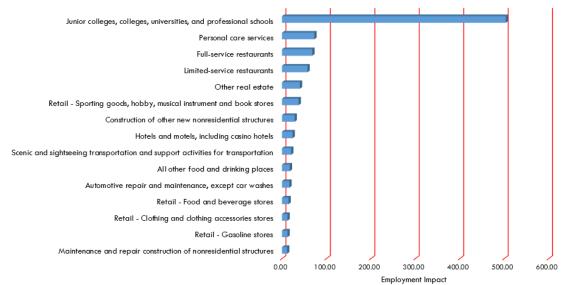
Source: BERC Calculations, IMPLAN Data

VI.F. Sectoral Distribution of CU's Economic Impact

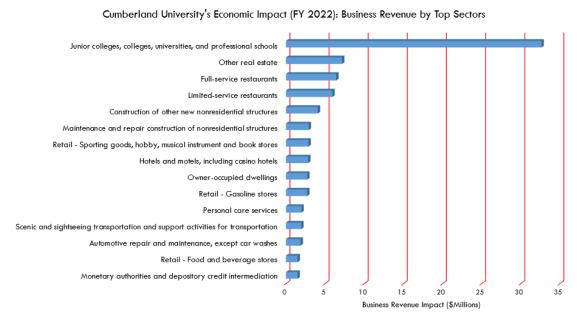
How is the total impact of CU distributed across major sectors? Because of the similarity in terms of size and distribution of economic impact results across sectors, we will highlight the sectoral distribution of selected economic impact figures for Wilson County.

Employment. Which sectors benefit most from the presence of CU in Wilson County? According to the chart below, the junior colleges, colleges, universities, and professional schools sector is the main beneficiary (503 jobs) due to CU's presence. After colleges and universities, personal care services places (73 jobs), full-service restaurants (68 jobs), and limited-service restaurants (about 57 jobs) are the sectors that benefit most from the impact of CU-related employment.

Cumberland University's Economic Impact (FY 2022): Employment by Major Sectors



Business Revenue. CU's total business revenue impact is estimated at over \$123.5 million in Wilson County. The distribution of business revenue by top sectors indicates that colleges and universities, other real estate, and full-service restaurants account for large components of this revenue. As indicated in the chart below, the next group of major sectors includes limited-service restaurants and the construction of new educational and vocational structures.



As does every university, Cumberland University plays a considerable role in the county's economic development in which it is located. CU's role is multifaceted and essential in supporting a competitive knowledge economy in the region.

The region, defined in this study as Wilson County, has experienced high growth rates over the past few years, surpassing the state average. Along with CU's increasing enrollment trend, the outlook for this small liberal arts university is positive.

In terms of quantifiable economic impact, CU-related economic activities in FY 2022 accounted for \$123.5 million in business revenue, \$42.48 million in personal income, 1,092 jobs, and \$5.74 million in state and local taxes. These contributions are in addition to CU's positive role in creating human capital in the county for 180 years.

Cumberland University plays a critical role in providing much-needed skills to students from around the globe. The quantifiable revenue and employment impacts of CU, while extremely significant, pale in comparison to the University's immeasurable total contribution to human capital creation, entertainment and recreation, social capital, and knowledge infrastructure.

- Annual economic impact estimate. (2020, October 13). https://www.aikcu.org
- Arik, M. (2012). Austin Peay State University and regional economy: Its impact on the Clarksville MSA and Montgomery County. Murfreesboro, TN: Middle Tennessee State University.
- Arik, M (2016). Cumberland University in Wilson County: Economic & Fiscal Impact of Its Operation. Murfreesboro, TN: Middle Tennessee State University.
- Arik, M. (2015). Economic impact or contribution: Essays on business and community relations. Lanham, MD: Lexington Books.
- Arik, M., & Penn, D. A. (2008). Economic contributions of Middle Tennessee State University (MTSU) to the local community: An update. Murfreesboro, TN: Middle Tennessee State University.
- Bellinger, W., Bybel, A., de Cabrol, C., Frankel, Z., Kosta, E., Laffey, T., & Wood, M. (2010). The economic impact of Dickinson College on Carlisle and Cumberland County, 2010. https://files.eric.ed.gov/fulltext/ED512393.pdf.
- Creighton, S., Sweeney, R., & Cauley, K. (2010). Consortium, university, and program impact on regional economy and community. *Journal of Community Engagement and Higher Education*, 1(2), 1-11.
- Cumberland University Bucks Higher Education Trends With Record Enrollment. Cumberland University. (2023, September). https://www.cumberland.edu/cumberland-university-bucks-higher-education-trends-with-record-enrollment/#:~:text=September%2011%2C%202023,stood%20at%202%2C704%20in %202020.
- D'Allegro, M., & Paff, L. A. (2010). Estimating the economic impact of higher education: A case study of the five colleges in Berks County, Pennsylvania. Professional File Number 117, Summer 2010. Association for Institutional Research.
- Economic Modeling Specialists International. (2014, June). Demonstrating the economic value of Kansas's independent colleges and universities. https://www.kscolleges.org/
- Economic Modeling Specialists International. (2015, February). Demonstrating the collective economic value of North Carolina independent colleges and universities. https://www.ncicu.org/
- Economic Modeling Specialists International. (2015, February). Demonstrating the economic value of Warren Wilson College. https://www.warren-wilson.edu/
- Economic Strength Rankings Metropolitan Areas. Policom. (2023). https://policom.com/rankings-metropolitan-areas/

- Felsenstein, D. (1995). Dealing with "induced migration" in university impact studies. Research in Higher Education, (4). 457.ti
- Galdamez, M., Kesteven, C., & Melaas, A. (2021). Best-Performing Cities 2021. Milken Institute. https://milkeninstitute.org/report/best-performing-cities-2023
- Hoffman, D., & Hill, K. (2009, May). The contribution of universities to regional economics: Productivity and prosperity project. https://wpcarey.asu.edu
- Humphreys, J., & National Center for Education Statistics (ED), W. D. (2006). Economic impact of the nation's Historically Black Colleges and Universities. Technical Report. NCES 2007-178. National Center for Education Statistics.
- Siegfried, J. J., Sanderson, A. R., & McHenry, P. (2008). The economic impact of colleges and universities. Change, 40(2), 24-29.
- Switek, M., Roh, H., Mansell, L., & Sacks, C. (2023). Best-Performing Cities 2023. Milken Institute. https://milkeninstitute.org/report/best-performing-cities-2023
- Tennessee Department of Tourism Development (2023, July). Tourism Economics Economic Impact of Visitors in Tennessee 2022. https://www.tourismeconomics.com/
- Tennessee Independent Colleges and Universities Association. (2022). 2022 Case Statement. https://ticua.org/page/publicationarchive
- Tennessee Independent Colleges and Universities Association. (2014, August). An analysis of the economic impact of Tennessee's private colleges and universities: 2012–2013. https://www.ticua.org/
- Tennessee Department of Tourism Development (2023, July). Tourism Economics Economic Impact of Visitors in Tennessee 2022. https://www.tourismeconomics.com/
- Tennessee Department of Tourist Development. Wilson County Travel Snapshot (2022). Retrieved from https://www.tnvacation.com/
- The University of Tennessee Knoxville. (2023). Population Estimates. Tennessee State Data Center. https://tnsdc.utk.edu/estimates-and-projections/population-estimates/
- U.S. Cities with the Most Economic Growth in 2021. Stessa. (2021). https://www.stessa.com/blog/cities-with-most-economic-growth/
- U.S. Census Bureau. (2022). https://data.census.gov/
- Vizard, R. (1968). The economic impact of a small college. Appraisal Journal, 36(2), 287.