



The Economic Impact of The University of North Alabama on Colbert and Lauderdale Counties

2021

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TABLE OF CONTENTS

iii	Executive Summary
1	Introduction
8	Impact of University Operations
15	Total Employment and Earnings Generated by UNA
16	Impact of Faculty, Staff, and Students
21	Community Service
24	Taxes Generated in the Local Economy
26	Degree Earnings Premium
31	Other Impacts
35	Attendance and Spending – UNA Home Football Games
37	A Note on Results



EXECUTIVE SUMMARY

What Is the Economic Impact of the University of North Alabama (UNA) to the Local Economy?

UNA has an impact on the local economy through:

- University Operations
 - *Payroll*
 - *Purchases*
 - *Capital Expenditures*
- Contractor Operations
 - *Payroll*
 - *Purchases*
- Student Spending
 - *Off-campus Purchases*
- University Events and Activities that Attract Visitors and Guests
 - *Off-campus Purchases by Visitors*

Total Impact (direct and induced effects)

Jobs as a result of the University	3,655.93
Earnings as a result of the University	\$443.55 million
Total Spending	\$341.31 million

Impact from University Payroll and University Contractor Payroll

Employment

Direct Employment	1,250.50
Direct Spending	158.06
Induced Employment	258.92
Total Jobs	1,667.47

Payroll

Direct Payroll	\$41,795,684
Direct Spending	\$4,688,718
Induced Payroll (Earnings)	\$13,890,452
Total	\$60,374,854

Direct Employment (Payroll) represents jobs (payroll) at the University of North Alabama and its contractors. Induced Employment (Payroll) represents jobs (earnings) that exist in the local economy as a result of the University of North Alabama. Total impact represents the injection of dollars into the local economy that are spent and re-spent until they leak out of the local economy.

Total Spending by University Employees and Students

Business Category	Annual Spending
Housing/Shelter	\$25,634,055
Utilities	21,708,222
Household Furnishings	1,908,090
Groceries	19,697,277
Restaurants	9,824,031
Healthcare	5,516,733
Apparel	2,734,889
Transportation (vehicle, maintenance)	24,192,354
Recreation and Entertainment	5,053,488
Personal and Business Services	3,605,909
Religious and Charitable Contributions	8,555,125
Personal Insurance	4,359,751
Other Retail	11,219,089
Total Spending	\$144,009,012

Savings University Employees and Students save a portion of their Incomes

Funds Deposited with Local Institutions

Checking	\$10,004,019
Savings	\$39,159,772
Total	\$49,163,791

Taxes Ownership of Property and Spending by University Employees and Students Generates Tax Revenue for Local Government.

Tax Category	Amount
Total Real Estate Taxes	\$966,771
Total Personal Property Taxes	\$393,653
Total Property Taxes	\$1,360,424
Direct Sales Taxes	\$2,395,751
Induced Sales Taxes	\$1,062,335
Total Sales Taxes	\$3,458,086
Total Local Taxes	\$4,818,510

UNA Home Football Game Revenues

UNA home football games generate over \$5.26 million each year into the Shoals economy.

Total Spent at Event	\$1,276,860
Total Spent in Community	\$2,844,555
Total Induced Earnings from Home Football Games	\$1,139,209

Earnings Premium for Graduates of the University of North Alabama

Highest Degree	Career Earnings
Not High School Graduate	\$1,222,039
High School	\$1,632,735
Some College	\$1,946,722
Bachelor's Degree	\$2,852,006
Master's Degree	\$3,353,386

These premiums suggest that each UNA student with a bachelor's degree who remains in the Colbert/Lauderdale County impact area, has over \$1.2 million more in lifetime earnings to spend or save than a high school graduate in the local impact area. A master's graduate who remains in the impact area has access to over \$1.7 million in additional lifetime earnings.

In addition, earning bachelor's and master's degrees increases sales taxes and charitable gifts.

Additional Contributions	Bachelor's	Master's
Sales Taxes	\$13,858.97	\$19,574.03
Charitable Gifts	\$25,743.36	\$35,810.74

For students who remain in the Shoals area, sales taxes and charitable giving are substantially increased, thus helping improve the overall quality of life in the area.

Community Service

UNA employees devote the following total annual hours to community service in the Shoals:

Category	Hours
Civic Clubs	10,629
Other Service	12,555
Board of Directors	7,062
Community/Government	18,297
School Boards	4,779
Youth Organizations	79,893
Church	46,726
Other	10,422

These activities are indicative of the fact that University employees tend to be very active in the local community, and further contribute to the betterment of the Shoals area.

The Economic Impact of the University of North Alabama 2021

INTRODUCTION

The University of North Alabama (UNA) offers numerous opportunities for learning and other activities. Each occasion affects the local community in various and expected ways. A more informed citizenry and enhanced personal enrichment opportunities add to the benefits that result from the presence of an institution of higher learning. The university also generates numerous economic benefits within the immediate and surrounding areas. All impacts are of great interest in assessing the value of UNA. However, the purpose of this study is to identify and estimate the economic benefits surrounding university operations within the immediate area. While economic benefits generated by UNA clearly flow into numerous areas surrounding the university in Northwest Alabama, Northeast Mississippi and South-central Tennessee, for purposes of this study, the Florence-Muscle Shoals Metropolitan Statistical Area (MSA)¹ has been defined as the immediate impact zone.

The study examines the economic impact of the UNA during the 2020-2021 academic year. In order to estimate the economic impact of current operations, various financial reports, expenditure records, employment and enrollment reports, etc. were examined by UNA staff and data made available to the consultants generating the report. In addition, a survey was administered and reviewed in order to determine the household characteristics and spending habits of university faculty, staff and students.

According to University representatives, data provided for the 2020-2021 academic year is representative of a typical year given current education industry characteristics and performance. Therefore, the economic impact of current operations, as detailed in this report, serves as a proxy for the yearly economic impact of UNA. Obviously, the exception to this

¹ The Bureau of Economic Analysis (BEA) defines the Florence-Muscle Shoals MSA as the combination of Colbert and Lauderdale counties.

proxy is that the economic impact varies based on local economic conditions and changes in university employment and spending patterns of faculty, staff and students and their households. Specifically, the size of the economic impact depends directly on employment and earnings at the university, how those earnings are spent, and the economic linkages present within the impact region itself and surrounding regions. As in previous versions of this study (the 2012 and 2017 Economic Impact of UNA studies), we include a section detailing earnings premiums for graduates of UNA (including associated economic benefits), and community service contributions of UNA employees.

Education Sector

Education plays a critical and burgeoning role for economic growth and stability in any local economy. Because of the nature of the service provided and campus footprint, a university typically employs a large number of workers and is often one of the largest employers in a region. Currently, UNA and vendors operating on campus have 1,958 paid employees ranging from faculty to administrative staff to building maintenance and ground crew and numerous student employees. This level of employment represents just under four percent (3.77%) of total employment in the MSA.² Additionally, comparing total UNA employment to a list of employees by firm, constructed by the Shoals Chamber of Commerce indicates that UNA is one of the largest employers in the MSA, now ahead of the largest manufacturing firm - North American Lighting - which employs 1,415.³ Obviously, many of these workers are full-time; however, all student employees and various other positions are employed on a part time basis. In fact, adjusting total paid employees to full-time equivalents (FTE) yields total full-time employment directly related to UNA equal to 1,250.5.

² Total occupations in the MSA – as of May 32020 - according to the Bureau of Labor Statistics (BLS) are 51,970 as shown in the MSA Occupational Employment Statistics table available at https://www.bls.gov/oes/current/oes_22520.htm.

³ The Shoals Chamber of Commerce list was provided by Chamber President Caitlin Holland.

Inflows and Outflows

The inflow of external dollars into a community expands the size of the local economy generating jobs and increasing incomes. Thus, when students from outside the impact zone attend UNA or Federal Student Aid is utilized to pay tuition of students from inside the MSA, new dollars are injected and the local economy is expanded and strengthened. UNA's Office of Student Financial Services indicates that students at UNA received more than \$40 million in student financial aid during the 2020-2021 academic year. This represents a substantial inflow of funds into the region. Completion of a degree also brings additional economic expansion as graduates earn higher incomes than their counterparts who do not graduate from college. On the other hand, when dollars are spent outside the local community – either by residents or UNA purchasing goods and services elsewhere or by students who decide to attend a different university – it represents a leakage and does not stimulate the local economy. Growing, vibrant economics seek to maximize inflows and minimize leakages.

Local economies benefit from the presence of universities because these facilities not only provide a source of skilled labor to sustain community employment needs and attract new high paying industries, but universities also help keep local dollars at home while increasing the inflow of federal monies. When tuition and university spending takes place in the local economy, it generates jobs and increases incomes within the local economy. Analogously, universities export their services when they serve students whose primary residence is outside the region. Expenditures related to the tuition of these students and parents or others who may visit the student during their time at UNA represent an injection of funds into the local economy. Oppositely, anytime education is purchased outside the region – by residents or other students –

other communities reap the benefits and, as stated previously, represent a leakage from the local economy.

Other Benefits

As discussed in the 2012 and 2017 UNA Economic Impact studies, the presence of a university in the local economy contributes to the education of the residents of a community. It is well understood that the local workforce becomes more productive as educational attainment increases. However, universities also provide other, less well known, benefits which are difficult to measure in dollar values. For example, universities typically have dynamic arts and cultural events such as art shows, music recitals and concerts. Universities also have the ability to bring nationally recognized authors and speakers to campus in order to share their experiences with students and the local community. Without the university, many residents of the region would not have the ability to easily access such events.

Benefits associated with events of this type are generally represented as quality of life improvements which unfortunately have subjective value depending on the individual and the event in question. Thus, quality of life benefits are referred to as non-pecuniary (non-monetary) in nature. Even though it is impossible to quantitatively measure these events, they are integral to development of the local economy. Local, existing firms seeking to expand current operations in the area or firms seeking to enter an area for the first time consider such quality of life issues as part of their expansion and/or new location decisions. Quality of life issues and potential industry expansion strengthen the local economy. Of course, the purpose of this study is to estimate the size of the economic impact of the university on the local economy. While these "other" benefits are important and should not be ignored, it is not the focus of this analysis since

they are difficult to measure. In the next section, impact types are discussed in greater detail.

Direct Benefits

A university directly impacts the local economy in many ways. Direct impacts are divided into several components and are identified in this section. As one of the largest employers in the area, the impact of the University on the surrounding community is substantial. Typically, the largest and most obvious direct university expenditure involves payment of wages to employees. Universities also make various purchases from local vendors on items ranging from utilizes to paper and soap. These expenditures from university operations contribute to the expansion of the local economy. As noted previously, any expenditure for supplies produced outside the region constitute a leakage from the impact zone and are not included in economic impact calculations of the specific region. In addition to discussing the direct employment and income of university employees, this study also provides estimates of employment and earnings associated with direct university spending within the impact region.

Induced Benefits

Hewings and Jensen (1986)⁴ identify the induced or consumption impact of entities such as hospitals, universities, and various businesses as the impact these firms have on the overall level of economic activity in the region. Specifically, when university employees spend their salaries in the impact zone, their spending cycles through the economy numerous times creating additional demand – known as the multiplier effect – which yields a total impact that is larger than the initial income paid to direct employees. As an example, anytime a university employee spends their earnings within the MSA, businesses in the area increase employment to meet the

⁴Hewings, G.J.D. and Jensen, R.C., (1986), "Regional interregional and multiregional input-output analysis," pp. 295-341. In P. Nijkamp(Ed.) Handbook of Regional and Urban Economics, Vol. 1. Amsterman: North Holland Publishing Company

increase demand. These employees also earn income which they may also spend in the local area, creating additional jobs and earnings at other businesses in the impact zone as dollars continue to re-circulate through the economy. However, this process does not continue infinitely, some earnings leak out of the spending stream each cycle as employees spend money outside of the impact zone or choose to save a portion of their earnings. Induced employment and earnings associated with university employee spending in the local area is estimated and presented below.

Indirect Benefits

The total economic benefit of a university far exceeds the direct and induced impacts noted above. Universities also have an indirect effect in the surrounding impact zone. As noted above, such indirect impacts are typically difficult to measure – as some indirect effects are non-pecuniary in nature – and therefore often omitted from traditional economic impact studies. However, such impacts should be noted as they do make a significant contribution to the local community. Examples of indirect benefits include, but not limited to, continuing education programs, clinical services through the nursing program, tax preparation, engagement with local businesses, assistance in shaping the economic development narrative of the region, and various other improvements to quality of life. For example, during the 2020-2021 academic year, UNA sponsored various student and community events such as theatre productions, Shoals Symphony events, flu shot clinics for faculty, staff, students and their dependents, etc. Other contributions to the community during the 2020-2021 academic year include employee participation in various community service organizations.

Study Design

To estimate the extent of direct and induced effects, multipliers produced by the BEA are utilized. The BEA uses a sophisticated process to estimate the multipliers for various economic activities and geographic areas including metropolitan areas, all counties and every state. The BEA also creates statistics – employment multipliers – that allow researchers to estimate the number of induced jobs that will likely be created due to direct employees spending their income within the study area. The primary impact zone utilized in this report has been identified as the Florence-Muscle Shoals MSA. The Bureau of Economic Analysis (BEA) provides multipliers at the MSA level which will be utilized to complete this analysis.

Relevant data were gathered from myriad sources at UNA with data collection facilitated by the Office of Business and Financial Affairs. The Business office provided university spending data, including categories such as direct expenditures on supplies, capital expenditures, contractor expenditures, etc. Spending patterns of employees and students were acquired utilizing an online survey. This data along with relevant data from the Census Bureau are used to estimate sales taxes generated from the various spending related to the university. The survey also allows us to estimate property taxes collected from individuals connected to UNA as well as estimates of deposits in local financial institutions.

Finally, as in the 2012 and 2017 UNA Economic Impact Studies, we include a section on the earnings premiums for graduates of the University of North Alabama, the economic impact of UNA home football games, and community service contributions of UNA employees.

IMPACT OF UNIVERSITY OPERATIONS⁵

Direct Benefits

The University of North Alabama is a major employer in the Colbert/Lauderdale region of North-West Alabama both in terms of the number of employees and in terms of the payroll. UNA provides employment to administrators, faculty and staff on a full-time basis. UNA employs a total of twenty-one administrators. There are 295 total faculty members employed by UNA on a full-time basis, and 467 total staff. Thus, there are 783 total full-time employees at the University.

Additionally, UNA employs some faculty and staff on a part-time basis. During the 2020-2021 academic year, UNA employed 200 faculty and staff on a part-time basis. (The university has no part-time administrators.) Finally, UNA employs 875 students, all of which are on a part time basis. Some students may only work for one hour during the entire year while others work the maximum of 20 hours per week. Student employment at UNA is derived from both graduate and undergraduate student populations. Full-time equivalence (FTE) positions are constructed in order to estimate the total direct full-time employment impact of UNA.⁶ The conversion from part-time faculty to full-time faculty yields an additional 110 FTE faculty members and 70 FTE staff members. Analogous conversion for students yields FTE student employment of 200. Combining full-time employees with FTE for part-time workers yields a total of 1,163 full-time employees at the University of North Alabama. This information is summarized in Table 1.

⁵ All information reported in this section is based on data provided by the University of North Alabama and its contractors in December of 2021. This information was gathered through interviews with various departments and agencies through the Office of Business and Financial Affairs.

⁶ It is assumed that a full-time employee will work 40 hours per week for a period of 52 weeks which yields 2,080 work hours per year. Thus, full-time equivalences are constructed by dividing total hours worked by part-time employees by 2,080. This calculation yields the total number of full-time employees which would be required to conduct the activities currently performed by part-time employees.

Earnings by administrators, faculty, staff and student employees in 2021 total \$59,432,311. UNA personnel use this income to purchase various items from local retailers, make mortgage payments, pay utility bills, provide savings for local financial institutions, etc. The impact of expenditures by faculty, staff and students on Colbert and Lauderdale Counties is examined in a subsequent section. Table 2 provides 2021 payroll by category.

Table 1: 2021 Direct UNA Employment

	Full-Time	Full-Time Equivalences	Total
Administrators	21	--	21
Faculty	295	110	405
Staff	467	70	537
Students*	--	200	200
Total Employment	783	380	1,163

* The student category includes both undergraduate and graduate student employment.

Source: Interviews with UNA personnel with FTE's estimated by consultants

Table 2: 2021 UNA Payroll by Category

	Payroll
Administrators	\$3,693,994
Faculty	28,719,988
Staff	25,239,363
Students	1,778,966
Total	\$59,432,311

Source: Interviews with UNA personnel

UNA utilizes contractors to provide various services that have an impact on the local economy. Specifically, UNA employs contractors for foodservice and campus bookstore operations. During 2021, University contractors employed 42 full-time employees.

Additionally, numerous part time employees are employed by contractors.⁷ Adjusting part-time contractor employees to FTE equals 45.5 full time workers. Thus, total full-time contractor employment equals 87.5 workers. Foodservice and bookstore employees earned a total payroll of \$1,498,000. Table 3 presents contractor employment and payroll data.

Table 3: 2021 Direct Contractor Employment and Payroll			
Employment	Full-Time	Full-Time Equivalences	Total
Foodservice	39	34	73
Bookstore	3	11.5	14.5
Total Employment	42	45.5	87.5
	Foodservice	Bookstore	Total
Payroll	\$1,298,000	\$200,000	\$1,498,000

Source: Interviews with UNA personnel and consultant projections

The final direct benefit examined in this economic impact study revolves around UNA and contractor spending within the impact area. University and contractor purchases boost the sales of local vendors. Increased sales generate additional earnings for firms engaged in business transactions with UNA and its contractors. Subsequently, these firms must employ more workers because of the increase in business. Additional rounds of earnings and expenditures translate into even greater employment and earnings opportunities for individuals in other industries and businesses in the Colbert/Lauderdale impact area.

Interviews with UNA employees indicate that UNA spent approximately \$14.9 million during 2021 on various supplies, utilities, paper, vehicle maintenance, etc. in the MSA impact

⁷ University contractors reported full-time equivalents so the exact number of part-time employees is unknown.

zone. This figure represents approximately thirty seven percent (37%) of total non-payroll expenditures. UNA also spent \$2.6 on capital projects within the impact region during the same time frame – representing approximately fifty percent (50%) of total spending on capital projects during the year. Capital spending in the local area, during 2021, is a little above the five-year annual average of \$2.4 million. However, total capital spending over the last five years is approximately \$53.8 million - with highest figure being \$22.2 million spent during 2020. Total capital spending during 2018 was the lowest, totaling only \$3.9 million. Food service contractors are projected to spend an additional \$149,796 within the MSA while the bookstore spends an estimated \$50,000. Direct spending for 2021 is summarized in Table 4 below.

Table 4: 2021 UNA Direct Spending, Employment and Payroll

	Spending	Employment	Payroll
General Spending	\$14,904,348	154.66	\$5,914,045.29
Capital Projects	\$2,636,594	25.90	\$1,406,622.90
Contractor Spending			
Food Service	\$149,796	2.60	\$71,587.51
Bookstore	\$50,000	0.79	\$20,955.00
Total	\$17,740,738	183.96	\$7,413,210.69

Source: Interviews with UNA employees and Consultant Projections

As noted previously, direct spending by UNA and associated contractors in the MSA generates additional employment and earnings in the impact area. Employment and earnings multipliers produced by the BEA⁸ allow for the estimation of the additional employment and earnings related to this direct spending. Specifically, the BEA provides employment and earnings estimates for sixty-four (64) industry subgroups. Since UNA spending occurs across a wide

⁸ These multipliers are produced by the BEA RIMS II program.

spectrum of sectors, it is appropriate to construct an average spending multiplier for the MSA. Specifically, excluding capital spending, the average employment multiplier is 10.38 jobs per \$1 million of spending while the earnings multiplier is \$0.3968 per \$1 of spending or \$39.68 in earnings per \$100 of spending. Table 4 indicates that general UNA spending generates 154.66 total jobs (132.45 FTE)⁹ and \$5.91 million in earnings.

Capital spending, foodservice spending, and bookstore spending allow usage of specific multipliers rather than average multipliers due to the less generalized nature of this spending. Examining BEA industry classification to identify those related to capital projects – construction, scientific and technical services, etc. – we are able to construct a capital spending multiplier. Capital spending by UNA in the impact region is projected to create 9.83 jobs per \$1 million of spending and \$0.5335 earnings per \$1 of spending. Alternatively, \$53.35 in earnings is generated for each \$100 of direct spending. Thus, as shown in Table 4, university capital spending generates an additional 25.9 total jobs (22.18 FTE) and \$1.4 million in earnings. Summation of general and capital spending impacts yields total employment generated from UNA spending equal to 180.56 (154.63 FTE) and earnings in excess of \$7.32 million.

Table 3 also details employment and earnings impacts of UNA foodservice and bookstore contractors. Fortunately, one industry subgroup available from the BEA is foodservice and drinking places. Direct spending in this industry generates 17.39 total employees per \$1 million of spending and \$0.4779 earnings per \$1 of spending (\$47.79 per \$100). Therefore, UNA's foodservice contractor generates 2.6 total jobs (2.23 FTE) and \$71,587.51 in earnings per year. On a broad basis, the BEA does not provide multipliers for bookstores so we employ multipliers

⁹ Basic application of BEA multipliers yields total jobs – full and part-time. The BEA also publishes an average FTE to total jobs ratio for conversion of total jobs to FTE. The generalized average FTE/Total Jobs ratio, as reported in the BEA RIMS II handbook is 0.8564. This ratio will be used to convert total jobs to FTE throughout the entire report.

from the Retail Trade sector for estimation purposes. Multipliers in this industry are slightly smaller than the foodservice industry with 15.79 employees generated per \$1 million of spending and an earnings multiplier of \$0.4191 per \$1 of spending (\$41.91 per \$100). Bookstore spending is projected to sustain 0.79 total jobs (0.68 FTE) per year and \$20,955.00 in earnings. Total employment and earnings generated by contractor spending equals 3.39 total jobs (2.90 FTE) and \$92,542.51 respectively. Adding contractor results to direct UNA spending increases spending related total employment to 183.96 (157.54 FTE) and total spending related earnings to \$7.41 million.

Induced Benefits

University and contractor employees use their earnings to make purchases in the local economy. This spending obviously boosts the sales of local vendors. Increased sales generate additional earnings for business firms and their employees. In addition, these firms must employ more workers because of the increased business. Additional rounds of earnings and expenditures translate into even greater employment and earnings in the Colbert/Lauderdale impact area. These effects are the induced or secondary effects of university and contractor employee expenditures.

To capture the secondary effects of employee spending, we again use RIMS II multipliers produced by the BEA. In this case, multipliers are identified for each level of activity. Specifically, multipliers for the Education Services sector are utilized to determine how direct UNA employees and payroll interact with other sectors of the economy. Additionally, multipliers for foodservice and drinking and retail sales are utilized to estimate the secondary impacts of contractor employee spending. As university faculty staff and administrators spend money in the MSA, each 100 employees is projected to sustain 20.4 total jobs and each \$100 in UNA payroll generates \$26.67 in additional earnings. From the contractor perspective, spending by foodservice employees generates 2.49 total jobs for each 10 jobs in the foodservice sector and

each 10 bookstore employees generates 2.36 total jobs. Additional earnings generated by foodservice and bookstore employee spending totals \$3.73 and \$3.80 per \$10 of earnings for each respective contractor.

Table 5 below details induced employment and earnings estimates generated by applying the multipliers described above. Given UNA's total FTE employment of 1,163, induced total employment generated in the area equals 237.25 (203.18 FTE). An additional 18.24 (15.62 FTE) total induced jobs result from UNA foodservice employment. Finally, 3.42 (2.93 FTE) jobs are generated in the local economy due to 14.5 FTE bookstore employees. Thus, more than 258 (221.74 FTE) additional people in the Florence-Muscle Shoals MSA have jobs because of UNA employment levels.

Table 5: UNA Induced Employment and Earnings		
	Employment	Earnings
UNA	237.25	\$15,850,597.34
Contractors		
Food Service	18.24	\$483,634.80
Bookstore	3.42	\$75,940.00
Contractor Total	21.67	\$559,574.80
Total	258.92	\$16,410,172.14

Source: Consultant Projections

These employees earn income as they work in various sectors of the economy. Table 5 reveals that the 258.92 (221.74 FTE) induced employees earn approximately \$16.41 million in induced earnings as a result of UNA and contractor employees spending their payroll in the impact region. Earnings generated by direct UNA payroll is obviously the largest induced impact as total UNA payroll of more than \$59 million results in \$15.85 million induced earnings. Foodservice payroll of \$1.3 million and bookstore payroll of \$200,000 induces an additional \$483,634.80 and \$75,940.00 in earnings respectively. Total induced contractor earnings equal \$559,574.80.

TOTAL EMPLOYMENT AND EARNINGS GENERATED BY UNA

The purpose of this section is to summarize total employment and earnings impact of UNA and associated contractors. The University of North Alabama employs a total of 1,163 full-time (recall that part-time workers are converted to FTE) faculty, staff, administration, and students. Foodservice and bookstore contractors sustain an additional 87.5 FTE jobs. This yields total direct FTE employment at UNA of 1,250.5. Direct spending by UNA and contractors generates additional total employment equal to 158.06 (135.36 FTE). Thusly, total employment directly related to UNA is 1,408.56 (1,385.36 FTE).¹⁰ Furthermore, employee spending generates an additional 258.92 total sustainable jobs (221.74 FTE) in the study region. Summation of direct and induced employment estimates yields total employment related to UNA equal to 1,434.46 (1,408.04 FTE). Total employment related to spending by UNA and Contractor employee spending equals 258.92 (221.73 FTE). Thus, total employment generated by UNA activities in the study region is 1,693.37 (1,629.77 FTE). Table 6 summarizes the total employment impact of UNA.

Table 6: 2021 Total Employment Generated by UNA

	Direct	Direct Spending	Induced	Total
UNA	1,163	180.56	237.25	1,580.81
Contractors				
Food Service	73	2.60	18.24	93.84
Bookstore	14.5	0.79	3.42	18.71
Contractor Total	87.5	3.39	21.67	112.56
Total	1,250.50	183.95	258.92	1,693.37

Source: Consultant Projections

¹⁰ Total employment described here combines FTE employment at UNA with total employment as estimated for direct spending. Total employment at UNA considering part-time employees as part-time is 1,520 – as discussed in a previous section.

Table 7 summarizes the total earnings related to the employment discussed above. Direct University payroll (including contractor's payroll) totals \$41.795 million. Total direct spending by UNA and contractors combine to generate \$4.688 million. Induced earnings, created as UNA and contractor employees spend their income within the study region, totals \$13.89 million. Across the various categories, earnings related to UNA are in excess of \$59.4 million while contractors contribute another \$1.5 million. Total earnings generated equal \$60.93 million. Including direct spending in the area – which represents the initial round of earnings for the businesses where the spending occurs – total overall earnings equal \$84,753,694.

Table 7: 2021 Total Earnings Generated by UNA

	Direct	Direct Spending	Induced	Total
UNA	\$59,432,311	\$7,320,668	\$15,850,597	\$82,603,577
Contractors				
Food Service	\$1,298,000	\$71,588	\$483,635	\$1,853,222
Bookstore	\$200,000	\$20,955	\$75,940	\$296,895
Contractor Total	\$1,498,000	\$92,543	\$559,575	\$2,150,117
Total	\$60,930,311	\$7,413,211	\$16,410,172	\$84,753,694

Source: Consultant Projections

IMPACT OF FACULTY, STAFF AND STUDENTS

Economic impact information presented unto this point has been based on a generalized impact on the Florence-Muscle Shoals MSA. The purpose of this section is to examine how UNA and its employees and students influence the various sectors of the local economy. Estimating more specific impacts of faculty, staff and students within the region requires specific information on household characteristics and spending patterns of each group. To obtain this information, all UNA employees and students were asked to complete a survey. A total of 384

students and 266 employees completed the surveys. These respondents reflect a representative mix of the overall makeup of the University's student body and employees.

Faculty, Staff, and Students

The following characteristics describe specific responses from respective surveys and do not represent estimates for the total employee and/or student population. Among employees, 157 (59.02%) would not be living in the Shoals area if UNA were located elsewhere. One hundred ninety-one students (49.74%) responded similarly. This is further reflected in that 78.9% of students have parents living outside of the Shoals, and 47.4% of student respondents are living in the Shoals specifically to attend UNA. Only 19.53% of students live at home with their parents. Just over 89% of responding employees live in the Colbert/Lauderdale county area. A large majority (82.39%) of responding employees are homeowners, while only 15.79% rent. Excluding students residing with their parents, 36.16% of student survey respondents indicate that they rent housing, while 34.52% are homeowners and 26.1% live in campus housing.

In addition to descriptive characteristics, survey results allow for calculation of population estimates and spending patterns for the entire employee and student populations at UNA. Unless otherwise noted, all remaining estimates in this section are considered to be representative of total faculty, staff, and student population behavior.

Faculty, Staff, and Student Income and Spending Patterns

Over the past year, total payroll for employees was \$59,432,311 and for students total gross income was estimated to be \$61,607,155. Contractor payroll was \$1,498,000. Estimates of additional annual net income for family members of employees and students totaled \$222.2 million. Adjusting employee (including contractor employees) payroll for taxes, retirement, insurance and other deductions, employee and student households earned in excess of \$200

million in net income during 2021. Households spend net income to purchase goods and services, make mortgage and car payments, pay the private school tuition discussed above, etc., as well as to pay sales and property taxes. Households will also save a portion of their net income. Employee and student surveys asked respondents to provide details concerning their spending habits in the study area for 2021. Estimates for total spending by category are provided in Table 8.

Information in Table 8 indicates that, excluding private school tuition, employees and students at UNA spent in excess of \$144 million in Colbert and Lauderdale Counties. Housing and Shelter is the largest expenditure category, with mortgage and housing rental payments totaling more than \$25.6 million. Furthermore, over the last five years, we estimate that faculty, staff, and students have spent over \$80 million purchasing or constructing new housing within the impact zone. Transportation expenditures constitute the second largest spending category with the total exceeding \$24.1 million. The transportation expenditure captures car payments as well as spending on gas and general maintenance. The survey also captured spending on new or used automobiles during the past year. Extrapolating survey results we estimate that faculty, staff, students and related households spent in excess of \$26 million purchasing approximately 945 automobiles during 2021. Expenditures on utilities totaled \$21.7 million, while grocery purchases were more than \$19.6 million. Charitable contributions from UNA personnel and student households were over \$8.5 million.

Expenditure levels shown in Table 8 represent only the direct or initial round of expenditures in the local economy. As is the case with local spending by UNA and university contractors, spending within a given region becomes incomes for others, and these individuals in turn spend a portion of their income on goods and services. Thus, spending by UNA employees,

students, and other household members generates additional earnings and employment opportunities in the area. Using BEA multipliers as discussed previously, induced employment and earnings are estimated. The most appropriate multipliers are determined by matching spending categories from Table 8 with BEA industry classifications for the study area.

Table 8: Employee and Student Spending Estimates

Business Category	Annual Spending
Housing/Shelter	\$25,634,055
Utilities	\$21,708,222
Household Furnishings	\$1,908,090
Groceries	\$19,697,277
Restaurants	\$ 9,824,031
Healthcare	\$5,516,733
Apparel	\$2,734,889
Transportation (vehicle, maintenance)	\$24,192,354
Recreation and Entertainment	\$5,053,488
Personal and Business Services	\$3,605,909
Religious and Charitable Contributions	\$8,555,125
Personal Insurance	\$4,359,751
Other Retail	\$11,219,089
Total Spending	\$144,009,012

Source. Consultant Projections

The induced employment and earnings estimates obtained so far have ignored spending by students and by household members of both employees and students. Thus, to get the total induced employment and earnings related to UNA households, it is necessary to estimate student and household spending in the local area. These amounts are estimated combining survey responses concerning income with consumption patterns from the Consumer Expenditure Survey (CEX), produced by the Bureau of Labor Statistics (BLS). Survey results indicate that total student income is \$61.6 million. Additional household income of both employees and students is \$222.2 million. This yields total additional household and student income of \$283.8 million.

Now that we have the appropriate income for students and UNA related households, the next step is to apply spending pattern estimates available from the CEX. Specifically, CEX indicates that residents in the southern region of the United States spend approximately 75.16% of their income on average.¹¹ While the majority of this consumption will take place in the various impact zones, some of the spending will leak out of the regional economy. Clearly, the amount of spending outflow that takes place will vary depending on the size of the impact zone considered – i.e. smaller regions present a greater opportunity for shopping outside the area simply because of the ease of traveling outside primary impact zone.¹² For purposes of this study, we assume spending outflow will be equal to twenty-seven percent (27%) of total spending.¹³

To estimate induced employment and earnings associated to various UNA related households, we will employ the average spending multipliers utilized to estimate the employment and earnings impact of direct UNA and contractor spending. Recall that 10.377 total employees are generated per \$1 million of spending and \$39.68 earnings are created per \$100 of spending.¹⁴ Application of CEX consumption estimates indicates that student and UNA related household spending is expected to exceed \$189.13 million. Spending multipliers reveal that this level of spending generates total employment of 1,962.56 (1,680.74 FTE) and earnings of \$75.05 million. Combining these induced impacts with total employment and total earnings shown in Tables 6 and 7 and student income, total employment related to UNA operations in the region equals 3,655.93 (3,130.94 FTE) and total earnings of \$221.4 million. Addition of employee and student household income elevates total earnings related to UNA to \$443.55

¹¹ Percentages for consumption and taxable sales for the Southern Region are calculated from Table 8. Region of Residence: Average Annual Expenditures and Characteristics, Consumer Expenditure Survey, 2009. Although this data is from 2009, it is still applicable as spending and taxable percentages are very stable over time.

¹² It is not necessary to estimate spending outflow in the previous discussion of induced employment and earnings as the BEA direct effect multipliers used in those calculations incorporate leakage estimates.

¹³ This 27% figure for spending outflow has been used in previous studies of the Florence-Muscle Shoals MSA. For a full discussion of this leakage estimate, see "Economic Impact of Regional Care Health Care Facilities," 2011, pp 14-15.

¹⁴ See discussion on page 12.

million.

UNA operations in the region also have an impact on financial institutions. As mentioned previously, faculty, staff, students and related households may choose to save a portion of their income. Any saving that is held as deposits with local financial institutions become available to the local market for loans for home construction, automobile financing, new and expanding business firms and other expenditures that provide additional benefits to the local economy. The amount of saving for employees, students and their households that is deposited in local financial institutions is estimated by examining average monthly checking and savings account balances as indicated by survey respondents. Estimates from the survey indicate that UNA related households hold total monthly checking and savings account balances in excess of \$7.5 million and \$15.4 million respectively. Specific amounts are shown in Table 9.

**Table 9: 2021 Funds Deposited with
Local Financial Institutions**

Checking	\$13,384,735
Savings	\$45,048,675
Total	\$58,433,410

Source: Consultant Projections

COMMUNITY SERVICE

Many UNA employees are engaged in service in the local area. Of the 266 completed surveys, there are 154 memberships/active participations in community organizations, including: civic clubs, other service organizations, serving on boards of directors, community or governmental organizations, school boards, and helping with youth activities. Each activity requires a (usually significant) time commitment.

The average amount of time employee respondents devoted to community service activities is more than sixteen hours/month. Average monthly time allotments for service activities are shown in Table 10.

**Table 10: 2021 Average Community Service
Hours per Month**

Category	Employee Hours
Civic Clubs	0.92
Other Service	1.09
Board of Directors	0.61
Community/Government	1.58
School Boards	0.41
Youth Organizations	6.91
Church	4.04
Other Service	0.90
Total	16.47

Source: Survey Results

To estimate the total community service hours for University employees, we multiply the average hours from the survey by the total number of UNA employees. Total estimates are presented in Table 11. Using this calculation, employees generate almost 16,000 community service hours per month. On a yearly basis, UNA employees provide various community organizations with over 190,000 hours of service. In addition to the time spent in service to the Shoals community, many employees and their families serve in leadership roles within their organizations.

Table 11: 2021 Total Community Service Hours

Category	Monthly	Yearly
Civic Clubs	885.72	10,628.67
Other Service	1,046.22	12,554.67
Board of Directors	588.50	7,062.00
Community/Government	1,524.75	18,297.00
School Boards	398.28	4,779.33
Youth Organizations	6,657.78	79,893.33
Church	3,893.87	46,726.43
Other Service	868.47	10,421.67
Total	15,863.59	190,363.10

Source: Consultant Projections

Volunteer time is not the only avenue through which UNA employees assist their local communities. Numerous faculty, staff, and students contribute a portion of their incomes to various charities – both within and outside the local community. From the employee and student surveys, it is estimated that total annual direct charitable giving within the MSA, as shown in Table 8, is \$8,555,125. Assuming that this level of charitable giving includes “other” household income from faculty, staff and students, it is possible to estimate charitable giving for induced earnings. Induced earnings of \$75.05 million, combined with charitable giving estimates available from the CEX, it is possible to estimate the charitable giving for earnings indirectly related to UNA. According to CEX estimates¹⁵, residents of the southern region of the United States contribute an average of 1.49% of their income to various charities. Applying this percentage to induced income above we estimate additional giving to charity of \$1.12 million per year. Without knowing where these charitable donations are made, we cannot simply add this giving to the \$8.55 million figure discussed above. On the other hand, we can conclude that UNA and related households contribute a minimum \$8.55 million to local charities on an annual basis.

¹⁵ *Supra Note 11*

TAXES GENERATED IN THE LOCAL ECONOMY

Using the University Employee Survey and University Student Survey, we obtained estimates of real estate tax collections and personal property tax collections in the two counties in the study area. This information is shown in Table 12. Total real estate taxes amounted to \$966,771 and total personal property taxes amounted to \$393,653, for a total of \$1,360,424 in local property taxes.

Table 12: 2021 Local Property Taxes

		Real Estate	Personal Property	Total
Colbert	Employee	\$159,186	\$67,618	\$226,804
	Student	\$125,050	\$28,640	\$153,690
Lauderdale	Employee	\$539,305	\$235,993	\$775,298
	Student	\$143,230	\$61,402	\$204,632
Total		\$966,771	\$393,653	\$1,360,424

Source: Consultant Projections

Sales tax collections in the study area are estimated using payroll information from employees, students, and household members. Employee payroll information is given in Table 2 of the report. Student and family member incomes were reported in the previous section. Using estimates constructed from survey responses from employees and students, the portion of total direct income devoted to taxable consumption is \$50,436,864. Applying the average tax rate in the study area, 4.75%, to this amount yields total sales tax collections of \$2,395,751.

As discussed above, total direct earnings generate additional earnings in the study area through the multiplier process. Based on induced earnings estimates provided in previous sections, CEX¹⁶ consumption data suggests, \$22,364,948 will be devoted to consumption that is subjected to sales taxes. Using the average sales tax rate in the two-county region yields sales tax

¹⁶ Supra Note 11, CEX estimates that 31.25% of total consumption is subject to sales taxes.

collections of \$1,062,335. Thus, total sales tax collections in 2021 as a result of spending by households both directly and indirectly related to UNA equal \$3,458,086. This information is summarized in Table 13.

In Table 14, total local taxes¹⁷ collected as a result of activities resulting from the existence of UNA are given. Total real estate taxes, total personal property taxes, and total sales taxes are summed to yield total local tax collections of \$4,818,510.

Table 13: Total Local Sales Taxes			
	Direct	Induced	Total
Taxable Sales	\$50,436,864	\$22,364,948	\$72,801,812
	Direct	Induced	Total
Sales Taxes	\$2,395,751	\$1,062,335	\$3,458,086

Source: Consultant Projections

¹⁷ It is worth noting that a portion of taxes at the state and national levels return to the local economy in various forms (i.e. teacher salaries, highway construction and maintenance, transfer payments of various types, etc.). However, it is impossible to estimate the exact percentage of state and national tax dollars collected from the impact area as a result of the university that are returned to Colbert and Lauderdale counties and therefore these values are noted but not included in this analysis.

Table 14: 2021 Total Local Taxes Collected

	Amount
Total Real Estate Taxes	\$966,771
Total Personal Property Taxes	\$393,653
Total Property Taxes	\$1,360,424
Direct Sales Taxes	\$2,395,751
Induced Sales Taxes	\$1,062,335
Total Sales Taxes	\$3,458,086
Total Local Taxes	\$4,818,510

Source: Consultant Projections

DEGREE EARNINGS PREMIUM

A major purpose of UNA is to provide the enhancement of human capital. This enhancement itself is an economic impact as it results in an increase in the productivity of students after graduation. Educational institutions serve as job creators for the employees and the suppliers of the school, as well as contributing to work force efficiency for each new graduate. We estimate the impact due to career earnings premiums by comparing the earnings of individuals who do and do not hold college degrees. Since UNA offers master's degrees, premiums are given for baccalaureate and master's degree holders.

The increase in total productivity resulting from an extra year of education can be estimated. Two complementary effects create this gain: increases attributable to improved worker quality and productivity gains from the worker's ability to use available physical capital more effectively. Research on the experience of the United States from 1840 to 2000 indicates that an additional year of education affords workers an eight to ten percent increase in productivity with an additional two to four percent productivity increase resulting from more

effective use of capital. The total productivity gain for an extra year of schooling is approximately 12 percent.¹⁸

Workers with college degrees enjoy higher salaries over their careers. Researchers Anthony P. Carnevale, Stephen J. Rose and Ban Cheah of the Georgetown University Center on Education and the Workforce¹⁹ estimate the premium paid for educational attainment across a worker's expected career. The lifetime earnings difference based on educational attainment was found to be significant. Table 15 provides estimates of lifetime earnings based on schooling.

The earnings presented in Table 15 apply to the total U.S. economy and do not necessarily reflect Alabama earnings estimates. Alabama salaries are generally lower than U.S. averages. However, the education premiums as reported are the difference in earnings for various levels of educational attainment and are aggregated by discipline. Thus, it is possible and perhaps likely that the lower high school graduate earnings in Alabama and the lower bachelor's graduate earnings in Alabama retain a difference similar to those reported in Table 15.

Earnings premiums for UNA graduates are calculated using high school graduation as the base case. The earnings premium for a bachelor's degree is \$1,218,271 and the earnings premium for a master's degree is \$1,720,651. These premiums suggest that each UNA graduate with a bachelor's degree who remains in the Colbert/Lauderdale County impact area has over \$1.2 million in additional lifetime earnings to spend or save relative to a high school graduate living in the study area. A graduate remaining in the local economy and possessing a master's degree has approximately \$1.72 million in additional lifetime earnings over and above a high school graduate to impact the local economy.

¹⁸ INCOME AND EDUCATION OF THE STATES OF THE UNITED STATES: 1840-2000, Scott Baier, Sean Mulholland, Chad Turner and Robert Tamura, Working Paper 2004-31. Federal Reserve Bank of Atlanta, 2004.

¹⁹ In a report titled, "The College Payoff – Education, Occupation and Lifetime Earnings"

Table 15: Lifetime Earnings by Level of Education and Education Premium

Highest Degree	Career Earnings	Education Premium
Not High School Graduate	\$1,222,039	--
High School	\$1,632,735	--
Some College	\$1,946,722	\$313,987
Bachelor's Degree	\$2,851,006	\$1,218,271
Master's Degree	\$3,353,386	\$1,720,651

Source: Carnevale, Rose, and Cheah (2011) adjusted for inflation. Education premiums are Consultant projections.

Utilizing CEX spending and charitable giving data that has been utilized previously in the report, we are then able to ascertain the impact that such earnings premiums have on the local economy when a graduate decides to remain in the local area. Applying these consumer behavior features to the lifetime earnings premium (bachelor's degree over and above a high school graduate) of a single individual that remains in the local economy yields \$668,426.31 in additional consumption. \$208,883.22 of lifetime earnings premium will be devoted to consumption that is subject to the sales tax. Thus, a bachelor's degree earning individual will pay \$9,921.95 in sales taxes over and above what a high school graduate pays (assuming a sales tax rate of 4.75%, an average tax rate for the four municipalities and the two counties).

Using the same CEX data but applying it to the earnings premium of a single individual that remains in the area with a master's degree over and above a high school graduate that remains in the area yields \$944,066.14 in additional consumption. \$295,020.67 of the lifetime earnings premium will be devoted to consumption that is subject to the sales tax. Thus, a master's degree earning individual will pay \$14,013.48 in sales taxes over and above what a high school graduate pays (again assuming a sales tax rate of 4.75% and that all spending is in the impact area).

CEX data estimates that 1.49% of the lifetime earnings premium is given to charity. (Note that we do not apply leakage to this calculation.) During their careers, those individuals earning a bachelor's degree have the ability to devote \$18,152.24 to charity over and above what a high school graduate donates and those individuals earning a master's degree devote \$25,637.70 to charity over and above what a high school graduate donates.

Applying RIMS II multipliers for the Colbert/Lauderdale impact area allows for the estimation of induced employment and earnings associated with degree earning premiums²⁰

The spending of the earnings premium of a single graduate earning a bachelor's degree residing in the local area is expected to generate 12.64 (10.82 FTE) induced jobs and \$483,409.93 in induced earnings over a 40-year career. This in turn generates an additional \$265,231.56 in consumption, of which \$82,884.86 is taxable consumption. This taxable consumption will generate \$3,937.03 in city and county taxes. Using the 1.49% for charitable giving, an additional \$7,202.81 in charitable giving is estimated to be generated by each student earning a bachelor's degree.

The spending of the earnings premium of a single master's degree earning graduate residing in the local area is expected to generate 17.85 (15.29 FTE) induced jobs and \$682,754.32 in induced earnings over a 40-year career. This in turn generates an additional \$374,605.45 in consumption, of which \$117,064.20 is taxable consumption. This taxable consumption will generate \$5,560.55 in city and county sales taxes. Using the 1.49% for charitable giving, an additional \$10,173.04 in charitable giving is estimated to be generated by each student earning a bachelor's degree. The total employment and earnings impact of the earnings premium in the local area would be the sum of the effect of each graduate who remains

²⁰ *Supra Note 14*

in the impact area after graduation.

Summing the direct and induced estimates yields the total impact for bachelor's and master's degree holders. For those earning bachelor's degrees, total additional consumption is \$933,657.87, of which \$291,767.86 is taxable. Using the same rates as previously given, this will in turn create \$13,858.97 in additional city and county taxes, and \$25,355.05 in charitable contributions. Analogously, for master's degree earners, total additional consumption is \$1,318,671.59, of which \$412,084.87 is taxable. Using the same rates as previously given, this will in turn create \$19,574.03 in additional city and county taxes, and \$35,810.74 in charitable contributions.

Although this report specifically focuses on impact of UNA on the local economy, earnings premiums still exist when a UNA graduate moves outside the Colbert/Lauderdale County area (which is often the case for certain disciplines). Using the premium estimates from Table 15 and graduation totals for the university (given in Table 16 ²¹), the total earnings premium for UNA graduates from 2011-2020 may be estimated. From Table 16, between 2011 and 2020, 10,754 undergraduate and 4,205 graduate students completed their degrees, for a total of 14,959 graduates.

Table 17 provides estimates of total earnings premiums for all graduates from 2011-2020. This is constructed by multiplying the number of graduates in each category by their respective premium. Results suggest that the total degree earnings premium of UNA students who graduated in this time-frame exceeds \$20 billion.²² Again, such contributions are in excess of contributions made by the earnings of high school graduates. Applying employment and earnings estimates per graduate reveals that earnings premiums of UNA graduates support almost 211,033.15 (180,728.79 FTE) jobs and more than \$8 billion in induced earnings over the work-

²¹ Source: UNA Office of Institutional Research, Planning and Assessment

²² An estimate of this nature should be viewed in light of the assumptions involved in the calculation, so that the reader can understand the degree to which the actual outcomes may differ from the estimated outcomes.

life career of the almost 15,000 graduates from 2011 – 2020.

Table 16: Total UNA Graduates 2011 - 2020

Academic Year	Undergraduate	Graduate	Total
2011/12	941	373	1,314
2012/13	952	338	1,290
2013/14	1,036	334	1,370
2014/15	955	309	1,264
2015/16	1,017	350	1,367
2016/17	1,125	379	1,504
2017/18	1,068	440	1,508
2018/19	1,168	509	1,677
2019/20	1,191	533	1,724
2020/21	1,301	640	1,941
Total	10,754	4,205	14,959

Source: UNA Institutional Research

Table 17: Total Earnings Premiums 2011 - 2020

Academic Year	Undergraduate Premiums	Graduate Premiums	Total Premiums
2011/12	\$1,146,393,011	\$641,802,823	\$1,788,195,834
2012/13	\$1,159,793,992	\$581,580,038	\$1,741,374,030
2013/14	\$1,262,128,756	\$574,697,434	\$1,836,826,190
2014/15	\$1,163,448,805	\$531,681,159	\$1,695,129,964
2015/16	\$1,238,981,607	\$602,227,850	\$1,841,209,457
2016/17	\$1,370,554,875	\$652,126,729	\$2,022,681,604
2017/18	\$1,301,113,428	\$757,086,440	\$2,058,199,868
2018/19	\$1,422,940,528	\$875,811,359	\$2,298,751,887
2019/20	\$1,450,960,761	\$917,106,983	\$2,368,067,744
2020/21	\$1,584,970,571	\$1,101,216,640	\$2,686,187,211
Total	\$13,101,286,334	\$7,235,337,455	\$20,336,623,789

Source: Consultant Projections

A final note on earnings premiums regards doctoral programs. As of 2020, UNA had no doctoral programs in place. However, in 2021, UNA debuted two new programs: the Executive Doctor of Business Administration, and the Ph.D. in Exercise Science and Health Promotion. The first doctoral students are expected to begin graduating in 2023. While this has no impact on earnings premiums on the current review period, it certainly will be a relevant component in future impact studies.

OTHER IMPACTS

The primary focus of the study is monetary impacts due to UNA in the Shoals. While the measurable impact is large, it understates the overall impact of the University for two reasons. First, some economic impacts are difficult to quantify, but we know they exist. Also, certain items of impact are more qualitative in nature. Any University aspects that contribute positively to quality of life in the Shoals make it more likely for residents (and businesses) to stay in the Shoals (if already here) or relocate to the area. In this section, we highlight examples of UNA's impact. Note that these are in addition to areas included in the 2017 UNA Economic Impact Study, including Shoals Shift, Arts and Cultural Production, and the Institute for Learning in Retirement.

Office of Regional Engagement

Following the work of Shoals Shift, the University formed the Office of Regional Engagement (ORE) in 2018. ORE consists of the Institute for Innovation and Economic Development (IIED), the Muscle Shoals Regional Center (MSRC), the Small Business Development Center (SBDC), the Agile Strategy Lab (ASL), and the Center for Learning and Professional Development (CLPD).

During the past five years, initiatives completed by ORE centers have received regional, national, and international recognition. The work on Shoals Shift (highlighted in the 2017 UNA Economic Impact Study) included completion of a \$1,000,000 grant from Appalachian Regional Commission (with the Shoals Chamber of commerce and the Shoals Business Incubator), as well as new events such as Shoals Spark (a K-12 competition) and the Liftoff Shoals competition for new businesses.

IIED was recognized through the international Deshpande Foundation Rising Star Award for innovation in curriculum. The Institute also received a Work-based Learning Regional Best Practice Award from Alabama Governor Kay Ivey, and was a University Economic Development Innovation+Talent Award finalist for the Institute Fellows program. To date, the program has paid over \$175,000 to more than 70 students for work on applied projects with local firms and agencies.

MSRC coordinated a grant for an interdisciplinary course – the Appalachian Teaching Project – taught in the Fall 2021 semester. Including students from areas in Economics, Geography, Public History, and Sports and Recreation Management, the class featured the development of projects for two communities – Courtland and Mooresville – as part of North Alabama's Singing River Trail.

The ASL moved from Purdue University to UNA in early 2020. During the time at UNA, ASL has worked on economic/community development initiatives in many areas in and beyond the USA. These include a national program throughout Ecuador using Strategic Doing, a large series of workshops in Calgary, AB, work with the Ohio State University and the University of North Carolina, and a major grant project for the Kauffman Foundation.

The visibility and reach of the work of the ORE centers has shown UNA to be a leader in

university community and economic development. This includes new and rare opportunities for students through exposure to methods such as Innovation Engineering, Strategic Doing, and Strategic Foresight. This collection of topical coverage is unique to UNA, and is one of many reasons that UNA has continued to grow in a time when many universities are struggling to maintain enrollments.

University Athletics

The University of North Alabama attracts many visitors to campus, and the visitors spend money in the local economy. Theatrical and musical performances, sporting events, academic and practitioner conferences, myriad camps and other youth events are held on campus. An estimate of the economic impact of university visitors is generated and presented for University athletics. The report is based on surveys addressing the economic impact of UNA football. Further analysis of other university events is difficult due to data limitations. For example, minimal information is available on visitor length of stay and visitor spending behavior for other University events. However, all University events generate economic impact for the Shoals.

Gate receipts were reported for UNA sporting events. An estimated 81,669²³ people attended various sporting events at the University during the 2019-2020 academic year, generating over \$245,000 in gate receipts. Table 18 provides a breakdown of attendance and gate receipts by sport by 2019. (Note that we usually report attendance for the most recent year in the study period. However, the impact of Covid-19 during 2020 rendered it an obvious anomaly. For this reason, we used data from the previous year as the more relevant data.

²³ UNA does not track official attendance for each sporting event. Thus, it is necessary to estimate attendance based on gate receipts, ticket prices and historical attendance/gate receipt ratios.

**Table 18: 2019 Sporting Events
Attendance and Receipts**

Event	Attendance	Gate Receipts
Football	47,738	\$213,512
Basketball	25,044	\$72,292
Baseball	3,460	\$7,169
Softball	2,407	\$5,136
Volleyball	1,383	\$4,233
Soccer	1,637	\$3,275
Total	81,669	\$305,617

Source: Interviews with UNA Personnel

Attendance and Spending—UNA Home Football Games

A total of 47,738 individuals attended UNA home football games during the 2019 season. Based on two surveys administered during the 2017 UNA Economic Impact Study, it is estimated that approximately 4,368 of the total number of attendees were students, and approximately 570 were faculty/staff.²⁴

Event Spending Projections (based on survey results)

The survey also captured expenditures at the event. Total spending on food at the game is estimated to be \$536,776, while spending on clothing amounted to \$39,468. Expenditures on various souvenirs totaled \$79,847, and \$120,769 in an “other” category. Thus, total expenditures at the event excluding the ticket price (see Table 18 for gate receipts) equal \$1,276,860 for the 2019 football season.

²⁴ Due to the COVID-19 pandemic, this edition of the UNA economic impact study utilizes athletic attendance from 2019 rather than 2020/2021 data. As surveys were not collected during the 2019 season, we utilize 2016 survey information along with 2019 football attendance figures to estimate total spending. Specifically, totals were generated by observing the behavior of each attendee category and calculating averages. The averages were next multiplied by the total number of attendees in each of the categories.

Outside Event Spending Projections (based on survey results)

Football attendees also spend dollars in the local economy outside of the event. Survey respondents were asked to identify expenditures on various items in the local economy including accommodations, fuel, food, clothing, souvenirs and, once again, an "other" category.

Total expenditures on fuel by football attendees amounted to \$363,304. Total spending on food by those attending home games totaled \$1,159,779. Attendees at the games report in the survey that \$349,332 was spent for clothing, and an additional \$114,780 was spent on various souvenirs. Projections from survey results suggest that approximately \$281,461 in hotel receipts were generated as a result of University of North Alabama football games. Finally, survey respondents claimed \$575,898 was spent on "other" items from the local economy. Thus, total community spending by those attending the football game amounted to \$2,844,555.

Total Spending

Summing expenditures for hotel rooms, expenditures at the event and expenditures in the impact area, because of football game attendance, yields total spending of \$4,121,415. This information is summarized in Table 19.

Induced Effects

This spending by football attendees in the local economy becomes income for workers in the Colbert/Lauderdale impact area. When these workers spend their earnings, additional income for other workers is generated. Subsequent rounds of expenditures create more income so that the initial spending is multiplied. Thus, the initial round of spending creates additional income and additional jobs in the local economy.

To capture the secondary effects of attendee spending, RIMS II multipliers are utilized.

Multipliers were selected to match the type of expenditures made by those attending football games; in particular an “accommodation” multiplier, a “spectator sport” multiplier and a “retail spending” multiplier. Applying the appropriate multipliers, the total impact of football attendee spending supports 44.71 (38.29 FTE) induced jobs and creates \$1.14 million in induced earnings.

Taxes are collected in the impact region due to the existence of home football games played by the University of North Alabama. Taxable expenditures in the community on food, clothing and souvenirs by those individuals attending games equal \$1,623,891. This spending generates subsequent rounds of spending and through the multiplier process results in an additional \$195,327.33 in induced taxable sales (CEX data utilized to estimate taxable sales). Thus, total taxable sales in the area as a result of football equal \$1,819,218. Subjecting this amount to the two-county average sales tax yields \$86,412.86 in sales tax collections. It should be noted that other taxes (i.e., gasoline tax, lodging taxes, etc.) – as well as additional sales taxes from “other” category spending are also collected. These taxes are not included in this analysis due to the fact that estimation of these taxes would be imprecise at best.

A NOTE ON RESULTS

Economic impact analysis has a high level of variability, as results are based on surveys and multipliers (which also are estimates). Additional dispersion results from changes in employment and other economic indicators in the local region and beyond. Differences from previous studies may be noted in each component. The entire impact on jobs, earnings, and spending will reflect these changes.

As noted in previous studies, several effects are difficult if not impossible to quantify. However, these effects are intuitively obvious to the observer. The University of North Alabama

offers numerous benefits for the Shoals area and northwest Alabama. Some are easier to estimate numerically. Both economic and non-pecuniary benefits are important. This study in no way implies that the harder to quantify values are less critical to quality of life in the Shoals.

**Table 19: Attendance and Estimated Spending
for 2019 UNA Home Football Games**

Attendance	47,738
Event Spending	
Food	\$536,776
Clothing	\$539,468
Souvenirs	\$79,847
Other	\$120,769
Total Event Spending	\$1,276,860
Community Spending	
Accommodations	\$281,461
Fuel	\$363,304
Food	\$1,159,779
Clothing	\$349,332
Souvenirs	\$114,780
Other	\$575,898
Total Community Spending	\$2,844,555
Total Spending	\$4,121,415

Source: Consultant Projections based on surveys collected at a UNA football game and online during the 2016 season.