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The Economic Impact of the University of Arkansas

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THE ECONOMIC IMPACT OF THE UNIVERSITY OF ARKANSAS

Produced for the Office of the Vice Chancellor for Economic Development



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Executive Summary

As the state's flagship institution of higher education, the University of Arkansas delivers a significant economic impact to Arkansas. In 2018, an impact in excess of \$2.2 billion came from the University via operations, construction, technology transfer, student expenditures, and visitor spending. The University of Arkansas has a substantial influence on the direction of the state's economy by fulfilling its land-grant mission of developing human capital, growing ideas, and transmitting knowledge to the public.

The Center for Business and Economic Research investigated the economic impact of the University in 2010 and 2014. This 2018 study provides an updated view of the effects of the University on the state and region. Key findings include:

- The University's economic activity of \$2.2 billion includes \$1.5 billion in recurring operational impacts and \$714.4 million in one-time construction impacts.
- Direct expenditures of \$948.1 million within Arkansas by the University had an economic output multiplier of 2.39 in 2018.
- In the 2018 fiscal year, the \$166.8 million in state appropriations to the University¹ were leveraged 13.56 times. Put another way, each dollar appropriated by the state of Arkansas to the University generated an economic impact of \$13.56.
- The University of Arkansas directly employs 4,841 faculty and staff with a payroll of \$388.6 million.
- Around 1,600 graduate students also receive some form of compensation from the University – including through grants – totaling \$23.1 million.
- Spending by students contributed \$453.5 million and spending by visitors added \$84.5 million to the Northwest Arkansas economy in 2015.
- The operations of the University and associated economic activities contributed more than \$89.5 million in state and local taxes in the form of income taxes, business taxes, property taxes and other taxes.
- The 2018 graduating class had an 82.8 percent placement rate and an average starting salary of \$51,997.
- Alumni account for 2.6 percent of the state's population, with 77,183 alumni earning \$2.7 billion in wages or 7.5 percent of the state's total and paid \$130.1 million in state income taxes, \$68.1 million in state sales taxes, and \$12.3 million in county sales taxes.
- In 2018, the University earned over \$90 million in research awards. This represents a 4.8 percent increase over the previous year and a 33.8 percent increase over 10 years. Research expenditures at the University of Arkansas were at a record \$175 million in 2018, up 10.5 percent from 2017 and 51.7 percent from 2010.
- In 2017, the University received 54 invention disclosures, filed 8 new patent applications, and received 13 patent issues.

¹ The figure includes money appropriated to the University, the Division of Agriculture Experimental Station Headquarters in Fayetteville, and the Arkansas Archaeological Survey.

- Numerous research and outreach centers provided valuable services to the state by serving children, increasing civic knowledge and participation, and making businesses more profitable.
- In Northwest Arkansas, the economic impact of the University of Arkansas was \$1.4 billion in 2018. This economic activity included \$1.3 billion in recurring operational impacts and \$67.6 million in one-time construction impacts.

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Introduction

Founded in 1871, the University of Arkansas was established in the city of Fayetteville as both the state university and the major land-grant university for Arkansas. The site chosen for the University of Arkansas (which was known as the Arkansas Industrial University until 1899) was located in the beautiful Ozark Mountains after successful efforts by the citizens of Fayetteville and Washington County, who raised sufficient funds to secure the location of the future flagship campus of the University of Arkansas System.

The University of Arkansas describes its mission as follows: “The University of Arkansas is determined to build a better world by providing transformational opportunities and skills, promoting an inclusive and diverse culture, nurturing creativity, and solving problems through research and discovery, all in service to Arkansas. Since 1871, our fundamental purpose as a land-grant institution and state flagship remains unchanged — to serve the state of Arkansas as a partner, resource and catalyst by: providing access to a comprehensive and internationally competitive public education, and fostering student success across a wide spectrum of disciplines; utilizing research, discovery and creative activity to improve the quality of life, develop solutions to the challenges we face and drive the state's economy; and contributing service and expertise through outreach, engagement and collaboration.” In 2018, the University fulfills this mission with 4,841 faculty and staff and around 1,600 graduate assistants that serve some 27,558 students.

Since its founding in 1871, the University of Arkansas has awarded a total of 202,273 degrees. Of these, 136,546 are bachelor’s degrees, 49,129 are master’s degrees, and 6,743 are doctorates. Enrollment counts during the same period total up to more than 1,025,495. In 2018, the University of Arkansas was home to 10 colleges that contribute to achieving the educational mission of the University. They are the Honors College, the Dale Bumpers College of Agriculture, Food and Life Sciences, the Fay Jones School of Architecture, the J. William Fulbright College of Arts and Sciences, the Sam M. Walton College of Business, the College of Education and Health Professionals, the College of Engineering, the Global Campus, the Graduate School, and the School of Law. These 10 colleges offer 239 different degree programs and certifications (the Honors College does not offer any degrees). These colleges also house numerous research and outreach centers that provide valuable and timely services to stakeholders in the public and private sectors.

The impact of the University of Arkansas is far reaching in social and economic terms. To measure the impacts of the University of Arkansas, the Office of the Vice Chancellor for Economic Development requested that researchers from the Center for Business and Economic Research conduct an updated study that qualitatively and quantitatively analyzes the impacts of the various functions of the University. This study builds on previous work, published in 2015 and 2010, that presents the activities of the University of Arkansas to various stakeholders at the University, in the local community, and throughout the state.

The new 2018 study provides a detailed analysis of how a large public research university impacts the economy at the state and other levels. The University of Arkansas depends on multiple income streams to support its operations. As a public institution, in 2018, the University received state appropriations totaling \$166.8² million. This state support is in recognition of the importance that a strong research university has to the economic well-being of Arkansas.

² The figure includes money appropriated to the University, the Division of Agriculture Experimental Station Headquarters in Fayetteville, and the Arkansas Archaeological Survey.

For this report, data were collected from many different departments in the University and other affiliated groups throughout the state. The data were analyzed and researchers from the Center provided reasonable estimates where the collected data alone were not sufficient to estimate the impact of a certain University function. After careful analysis, the following report demonstrates that the University of Arkansas delivered an economic impact to the state of Arkansas in excess of \$2.2 billion in 2018. This impact comes from the University via operations, construction, technology transfer, student expenditures, and visitor spending. The following report describes these impacts in great detail.

Economic Impact of University of Arkansas Operations

Direct annual spending from the University of Arkansas contributes a significant economic impact to the Northwest Arkansas and statewide economies. Expenditures, both in and out of the state, from the University of Arkansas totaled over \$1.3 billion in the 2018 fiscal year (or the 2017-2018 academic year). Since the University of Arkansas does not maintain records by geography of spending, Cheryl Canfield from the Office of Business Affairs meticulously compiled spending invoices by zip codes that were within Northwest Arkansas and the state of Arkansas¹ so that the economic impacts in this report could be calculated. In some cases, payments that were made to local businesses through third party financial agents were corrected for and attributed to the local economy. Payments from the University of Arkansas to vendors occur through a variety of payment methods. The University uses Purchase Orders, Blanket Orders, PCards and TCards to make payments. In addition to expenditure data provided by the Office of Business Affairs, additional data were obtained from the University Athletic Department and added to the appropriate category of University spending. Expenditures by the University of Arkansas in fiscal year 2018 are provided in the table below by category of spending and the estimate of the portion of the spending that occurred in Northwest Arkansas and in the state. According to the numbers provided by the Office of Business Affairs, in-state spending by the University amounted to \$948.1 million and equaled 70.4 percent of the University's total spending, while \$519.7 million or 54.8 percent of the total spending occurred in Northwest Arkansas.

A significant portion of the University's expenditures goes toward payroll for the faculty and staff employed by the institution. In fiscal year 2018, payroll expenditures were nearly \$419.3 million or 31.1 percent of the total annual spending. This annual payroll expenditure occurred within Northwest Arkansas. Spending on facilities equaled \$497.1 million or 36.9 percent of the total spending. One-time construction spending of \$465.4 million accounted for most of the expenditures on facilities in the 2018 fiscal year. 91.2 percent of the spending on facilities remained in Arkansas and 12.1 percent remained in Northwest Arkansas. The University spent \$261.4 million or 19.4 percent of the total on services that included marketing, professional services, honoraria, computer services, auto repairs, event security, consulting services, library related services, equipment leases, etc. Of this spending on services, \$31.4 million or 12.0 percent stayed in Arkansas and \$10.7 million or 4.1 percent stayed in Northwest Arkansas. Wholesale and retail purchases accounted for 10.1 percent of the total University spending. These purchases included food and beverages, equipment, office supplies, health and lab supplies, agricultural supplies, and more. 28.9 percent of wholesale and retail expenditures were made in Arkansas and 20.7 percent of these expenditures were made in Northwest Arkansas.

Table 1: University of Arkansas Expenditures, 2018

University of Arkansas Expenditures, 2018			
Category	All Spending	Arkansas Spending	NWA Spending
Payroll	\$419,340,880	\$419,340,880	\$419,340,880
Facilities			
Building & Maintenance Operations	\$10,612,244	\$2,015,705	\$821,811
Contract Construction	\$465,442,117	\$432,751,212	\$44,550,889
Electric	\$11,455,047	\$11,455,047	\$10,796,368
Gas	\$3,845,901	\$3,845,901	\$1,108,584
Water	\$2,116,294	\$1,946,623	\$1,889,891
Waste Management	\$433,530	\$433,530	\$-
Rent	\$3,255,451	\$1,034,055	\$1,033,985
Facilities Subtotal	\$497,160,584	\$453,482,073	\$60,201,528
Wholesale & Retail Purchases			
Food & Beverages	\$25,340,561	\$16,543,437	\$15,133,308
Chartwells	\$11,009,221	\$5,504,611	\$5,504,611
Equipment & Repairs	\$21,165,080	\$3,372,037	\$816,854
Office Supplies	\$3,687,830	\$1,057,077	\$461,969
Office Supplies (PCard)	\$14,414,215	\$5,375,570	\$4,228,016
Health & Lab Supplies	\$34,527,898	\$2,008,909	\$432,743
Agri Supplies	\$1,384,653	\$753,164	\$73,544
Other Supplies	\$10,801,378	\$2,843,803	\$1,484,942
Purchase for Resale	\$11,238,056	\$1,584,243	\$110,017
Other Capital Purchases	\$3,089,030	\$457,943	\$81,927
Wholesale & Retail Subtotal	\$136,657,922	\$39,500,794	\$28,327,931
Services			
Advertising/Marketing/Promotion	\$2,760,124	\$1,530,107	\$413,202
Professional Services	\$21,248,762	\$12,740,082	\$3,483,917
Honorarium	\$61,403	\$9,869	\$7,048
Computer/Data Services	\$16,720,479	\$2,413,098	\$95,144
Auto Repairs & Tires	\$2,912,127	\$1,987,405	\$842,568
Event Officers	\$1,546,044	\$1,546,044	\$1,338,925
Management/Consulting	\$154,718,995	\$1,229,638	\$189,624
Subscriptions/Publications	\$5,028,085	\$826,947	\$736,712
Equipment Rent/Lease (exclude autos)	\$896,725	\$224,549	\$212,359
Other Services	\$46,366,945	\$7,157,420	\$2,893,030
Insurance	\$5,946,737	\$86,707	\$78,236
Postal	\$1,105,251	\$781,660	\$238,957
Print	\$2,182,609	\$886,277	\$196,385
Services Subtotal	\$261,494,287	\$31,419,804	\$10,726,106

Travel			
Hotel & Lodging	\$7,533,861	\$1,515,037	\$493,334
Air	\$8,890,615	\$-	\$-
Registration	\$1,394,752	\$122,407	\$-
Meals	\$3,157,083	\$856,021	\$139,454
Transportation	\$5,402,598	\$765,169	\$524,756
Incidentals	\$5,460,041	\$1,166,931	\$-
Travel Subtotal	<i>\$31,838,950</i>	<i>\$4,425,565</i>	<i>\$1,157,544</i>
Grand Total	\$1,346,492,623	\$948,169,115	\$519,753,988

Source: University of Arkansas Business Affairs

The economic impact of spending from the University of Arkansas in fiscal year 2018 was calculated by researchers at the Center for Business and Economic Research using data shown above. The business expenditures of the University of Arkansas allow researchers to allocate the spending to sectors within the IMPLAN input/output model to obtain the overall economic impact including indirect and induced impacts. A detailed description of the IMPLAN input/output model can be found in the Appendix. This method of calculating the economic impact of the University of Arkansas using the IMPLAN input/output model follows best practices identified by the Association of Public and Land-Grant Universities (APLU). The one-time construction expenditures of the University were separated from the annual business expenditures of the University and its economic impact was calculated separately using the IMPLAN input/output model.

Business Expenditure Impacts

The annual business expenditures of the University created additional economic activity within the state of Arkansas and the Northwest Arkansas region through indirect and induced impacts. For the state of Arkansas, the output multiplier for economic activities associated with the annual business expenditures was 1.59 in the 2018 fiscal year. This means for every dollar of business expenditures at the University, the total economic impact generated within the state was \$1.59. In 2018, these annual business expenditures generated an economic impact of \$923.1 million in Arkansas. These activities directly supported 11,084 jobs in Arkansas and a total of 13,703 jobs through indirect and induced effects. Total labor income generated in Arkansas by the annual business expenditures was \$563.7 million in 2018.

Table 2: University of Arkansas Business Expenditures Economic Impact in Arkansas

University of Arkansas Business Expenditures Economic Impact in Arkansas				
Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	11,084	\$459,126,208	\$538,467,398	\$577,648,261
Indirect Effect	167	\$7,889,944	\$14,178,485	\$26,301,099

Induced Effect	2,452	\$96,669,406	\$178,519,499	\$319,172,167
Total Effect	13,703	\$563,685,558	\$731,165,382	\$923,121,527

For the Northwest Arkansas region, the output multiplier for economic activities associated with the annual business expenditures was 1.42 in the 2018 fiscal year. This means for every dollar of business expenditures at the University, the total economic impact generated within the Northwest Arkansas region was \$1.42. In 2018, these annual business expenditures generated an economic impact of \$770.4 million in Northwest Arkansas. These activities directly supported 10,083 jobs in Northwest Arkansas and a total of 11,860 jobs through indirect and induced effects. Total labor income generated in Northwest Arkansas by the annual business expenditures was \$512.6 million in 2018.

Table 3: University of Arkansas Business Expenditures Economic Impact in Northwest Arkansas

University of Arkansas Business Expenditures Economic Impact in Northwest Arkansas				
Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	10,083	\$441,993,738	\$519,571,902	\$543,528,342
Indirect Effect	84	\$4,088,516	\$7,162,941	\$12,632,249
Induced Effect	1,693	\$66,532,658	\$123,843,736	\$214,227,657
Total Effect	11,860	\$512,614,912	\$650,578,579	\$770,388,247

These business activities of the University of Arkansas and their associated economic impacts contributed significant tax collections that accrued to both the state of Arkansas and the various local governments in the areas of operation. According to estimates from the IMPLAN software, the direct business activities of the University generated a total of \$17.1 million in taxes to state and local governments while the total taxes contributed when factoring in indirect and induced effects amounted to \$38.1 million.

Table 4: Estimated State and Local Taxes Generated by University of Arkansas Business Expenditures

Estimated State and Local Taxes Generated by University of Arkansas Business Expenditures					
Tax Type	Employee Compensation	Tax on Production and Imports	Households	Corporations	Total Taxes Generated
Direct Effect	\$112,878	\$4,773,093	\$11,449,684	\$772,111	\$17,107,766
Total Effect	\$135,964	\$22,425,616	\$14,083,264	\$1,486,104	\$38,130,948

Construction Impacts

The one-time direct expenditures from construction activities at the University of Arkansas created additional economic activity within the state of Arkansas and Northwest Arkansas region through indirect and induced impacts. For the state of Arkansas, the output multiplier for economic activities associated with the one-time construction activities was 1.65 in the 2018 fiscal year. This means for every dollar of construction expenditures at the University, the total economic impact generated within the state was \$1.65. In 2018, one-time construction activities generated an economic impact of \$714.4 million in Arkansas. The construction activities directly supported 2,521 jobs in Arkansas and a total of 4,300 jobs through indirect and induced effects. Total labor income generated in Arkansas by the construction activity was \$197.7 million in 2018.

Table 5: University of Arkansas Construction Economic Impact in Arkansas

University of Arkansas Construction Economic Impact in Arkansas				
Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	2,521	\$116,630,462	\$149,455,422	\$432,751,196
Indirect Effect	923	\$47,398,901	\$84,565,592	\$170,440,054
Induced Effect	856	\$33,684,347	\$62,271,458	\$111,228,334
Total Effect	4,300	\$197,713,709	\$296,292,472	\$714,419,584

For the Northwest Arkansas region, the output multiplier for economic activities associated with the one-time construction activities was 1.52 in the 2018 fiscal year. This means for every dollar of construction expenditures at the University, the total economic impact generated within the Northwest Arkansas region was \$1.52. In 2018, one-time construction activities generated an economic impact of \$67.7 million

in Arkansas. The construction activities directly supported 249 jobs in Northwest Arkansas and a total of 400 jobs through indirect and induced effects. Total labor income generated in Northwest Arkansas by the construction activity was \$20.3 million in 2018.

Table 6: University of Arkansas Construction Economic Impact in Northwest Arkansas

University of Arkansas Construction Economic Impact in Northwest Arkansas				
Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	249	\$12,940,045	\$16,542,803	\$44,550,888
Indirect Effect	85	\$4,812,245	\$8,163,526	\$14,792,634
Induced Effect	66	\$2,583,279	\$4,816,740	\$8,323,844
Total Effect	400	\$20,335,569	\$29,523,069	\$67,667,367

The construction activities at the University of Arkansas and their associated economic impacts generated significant one-time tax payments that accrued to both the state of Arkansas and the various local governments. According to estimates from the IMPLAN software, the direct business activities of the University generated a total of \$4.8 million in taxes to state and local governments while the total taxes contributed when factoring in indirect and induced effects amounted to \$20.9 million.

Table 7: Estimated State and Local Taxes Generated by University of Arkansas Construction Expenditures

Estimated State and Local Taxes Generated by University of Arkansas Construction Expenditures					
Tax Type	Employee Compensation	Tax on Production and Imports	Households	Corporations	Total Taxes Generated
Direct Effect	\$16,770	\$1,449,489	\$3,027,051	\$325,550	\$4,818,860
Total Effect	\$34,953	\$14,938,602	\$5,066,536	\$854,485	\$20,894,576

Economic Activity Generated by University of Arkansas Students

Students who attend the University of Arkansas make an important contribution to the Northwest Arkansas economy. Their estimated expenditures in the local economy are based on survey responses from a representative sample of all students. 2,700 students were sent surveys as part of a sample that was drawn from 27,558 students and constituted in proportion to various factors which included student academic level and residency. The survey was conducted online by researchers from the Center for Business and Economic Research in the spring of 2018. A copy of the survey instrument can be found in the Appendix. For the analysis of student expenditures, students were separated into four groups based on academic level as researchers at the Center assumed that each of the levels would have sufficiently different living and spending patterns. For example, most freshmen at the University of Arkansas are required to live in on-campus residence halls and spend most of their food expenditures on campus meal plans, while graduate students who are older have a steadier income than most undergraduate students.

Table 8: Residence of University of Arkansas Students

Residence of University of Arkansas Students		
City/County	Percent of Students	Estimate of Student Residents
Bella Vista	0.5%	129
Bentonville	2.0%	541
Elkins	0.7%	202
Farmington	1.3%	347
Fayetteville	86.4%	23,803
Goshen	0.2%	67
Greenland	0.0%	0
Lincoln	0.0%	0
Lowell	0.0%	0
Madison County	0.0%	0
Other	1.4%	388
Prairie Grove	1.3%	367
Rogers	1.2%	340
Siloam Springs	0.5%	134
Springdale	3.6%	980
Tontitown	0.0%	0
Washington County - other	0.0%	0
West Fork	0.2%	67
Benton County - Other	0.7%	191
Total	100.0%	27,558

Source: Center for Business and Economic Research Survey Data²

Average monthly expenditures of student respondents from the survey sample are listed in the table below. The table shows the average monthly expenditures by students in the various student academic levels and the percent of students surveyed spending money on each category. In order of magnitude, the largest monthly expenses of students were rent, groceries, and motor vehicle related purchases.

Table 9: Average Student Spending Per Month

Average Student Spending Per Month								
Category	Freshmen		Other Undergraduates		Graduate Students		Law Students	
	Percent Use	Average Amount	Percent Use	Average Amount	Percent Use	Average Amount	Percent Use	Average Amount
Bars	0.0%	\$0.00	40.4%	\$75.00	50.8%	\$71.03	20.0%	\$15.00
Books*	79.5%	\$383.97	87.2%	\$379.79	61.2%	\$206.50	100.0%	\$690.00
Cable	8.2%	\$113.33	11.6%	\$83.86	23.9%	\$107.56	20.0%	\$124.00
Cell Phone (479 area code)	32.9%	\$71.75	30.0%	\$79.44	40.3%	\$85.89	40.0%	\$75.00
Clothing	72.6%	\$68.02	63.2%	\$70.56	59.7%	\$100.50	100.0%	\$62.00
Electric	15.1%	\$107.45	46.8%	\$76.99	83.6%	\$89.88	80.0%	\$101.25
Entertainment, Recreation, and Sports	74.0%	\$35.46	72.8%	\$34.46	59.7%	\$57.53	40.0%	\$15.00
General Merchandise	50.7%	\$51.35	55.6%	\$70.72	52.2%	\$112.86	80.0%	\$293.75
Groceries	84.9%	\$127.34	89.6%	\$185.45	94.0%	\$264.13	100.0%	\$330.00
Internet	11.0%	\$104.00	39.2%	\$57.89	74.6%	\$63.25	80.0%	\$91.25
Laundry/Dry Cleaning	27.4%	\$18.30	23.2%	\$24.88	29.9%	\$27.50	60.0%	\$33.33
Medical and Dental out of pocket	27.4%	\$144.75	24.0%	\$101.87	31.3%	\$171.67	40.0%	\$40.00
Mortgage	0.0%	\$0.00	5.6%	\$890.36	14.9%	\$1,527.70	0.0%	\$0.00
Motor Vehicle Purchases, repair, fuel	67.1%	\$91.02	71.2%	\$261.26	74.6%	\$125.30	80.0%	\$82.50
Natural Gas and/or Heating Oil	4.1%	\$86.67	20.0%	\$46.88	37.3%	\$81.60	80.0%	\$67.50
Other	2.7%	\$100.00	6.0%	\$44.44	10.5%	\$52.00	0.0%	\$0.00
Other Personal Services (Barber/beauty shop, fitness)	64.4%	\$35.21	62.0%	\$59.48	64.2%	\$76.07	80.0%	\$223.75

Pharmacy (prescription or nonprescription)	38.4%	\$39.07	40.4%	\$472.31	46.3%	\$47.10	60.0%	\$30.00
Rent for a NON-University Owned Property	11.0%	\$491.75	66.0%	\$671.29	74.6%	\$615.44	80.0%	\$223.75
Restaurants	91.8%	\$82.01	92.4%	\$87.77	92.5%	\$118.06	100.0%	\$371.00
Landline Telephone	5.5%	\$67.50	4.0%	\$26.50	6.0%	\$26.25	20.0%	\$50.00
Local Transportation	31.5%	\$52.73	31.6%	\$34.37	25.4%	\$54.71	0.0%	\$0.00
Water and Sewer	12.3%	\$90.67	37.2%	\$52.17	70.2%	\$59.04	80.0%	\$65.00
Live Performances	17.8%	\$35.77	16.0%	\$36.95	20.9%	\$45.50	40.0%	\$110.00
Museums	4.1%	\$10.00	5.2%	\$12.77	9.0%	\$23.00	0.0%	\$0.00
*The books and supplies category shows the average expenditure per semester								

Source: Center for Business and Economic Research Survey Data

In order to obtain an estimate of total local spending by all students, researchers from the Center multiplied the percent of students spending on a certain category with the number of local students in each academic level and their respective spending in each category. The monthly spending for all categories was multiplied by 12 to estimate annual spending except for the books and supplies category which was multiplied by two.

Students spent an estimated \$453.5 million in Northwest Arkansas in 2018. Student spending on rent across all academic levels accounted for \$119.4 million and was 26.2 percent of the total spending. Spending on groceries accounted for \$55.4 million or 12.1 percent of the total spending, while spending on fuel and other expenses related to motor fuels accounted for 10.3 percent of the total spending. In 2018, sophomores, juniors, and seniors at the University of Arkansas spent \$306.8 million in the Northwest Arkansas economy, graduate students spent \$88.3 million, freshmen spent \$47.8 million and law students spent \$10.6 million.

Student expenditures on items such as spending on groceries, restaurants, entertainment, and books that are subject to the sales tax amounted to \$138.8 million. Researchers from the Center estimate that students paid \$9.0 million in state sales taxes for these purchases. Using an average of 3.25 percent for local sales taxes, researchers also estimate these student purchases resulted in the collection of \$4.5 million by local governments.

Table 10: University of Arkansas Estimated Spending from Students

University of Arkansas Estimated Spending from Students					
Category	Freshmen	Other Undergraduates	Graduate Students	Law Students	All Students (Millions)
Bars	\$0.00	\$6,112,116.00	\$1,799,787.76	\$12,708.00	\$7.93
Books*	\$3,805,889.24	\$11,134,271.60	\$1,051,615.12	\$487,140.00	\$16.48
Cable	\$695,215.68	\$1,962,216.89	\$1,282,581.67	\$105,052.80	\$4.05
Cell Phone (479 area code)	\$1,765,898.95	\$4,807,391.04	\$1,728,243.40	\$127,080.00	\$8.43
Clothing	\$3,694,146.07	\$8,995,905.12	\$2,995,920.00	\$262,632.00	\$15.95
Electric	\$1,213,807.41	\$7,268,375.04	\$3,750,862.03	\$343,116.00	\$12.58
Entertainment, Recreation, and Sports	\$1,963,155.87	\$5,060,751.36	\$1,714,828.84	\$25,416.00	\$8.76
General Merchandise	\$1,947,636.39	\$7,931,630.40	\$2,943,752.24	\$995,460.00	\$13.82
Groceries	\$8,087,535.11	\$33,518,602.08	\$12,401,022.09	\$1,397,880.00	\$55.41
Internet	\$855,803.52	\$4,577,631.96	\$2,357,006.52	\$309,228.00	\$8.10
Laundry/Dry Cleaning	\$375,102.27	\$1,164,327.84	\$409,889.55	\$84,720.00	\$2.03
Medical and Dental out of pocket	\$2,966,997.49	\$4,931,650.56	\$2,686,639.70	\$67,776.00	\$10.65
Mortgage	\$0.00	\$10,057,759.20	\$11,385,241.25	\$0.00	\$21.44
Motor Vehicle Purchases, repair, fuel	\$4,568,875.70	\$37,523,954.40	\$4,669,014.63	\$279,576.00	\$47.04
Natural Gas and/or Heating Oil	\$265,817.76	\$1,891,326.72	\$1,520,317.61	\$228,744.00	\$3.91
Other	\$201,981.60	\$537,920.00	\$271,272.36	\$0.00	\$1.01
Other Personal Services (Barber/beauty shop, fitness)	\$1,696,422.61	\$7,439,433.60	\$2,437,724.96	\$758,244.00	\$12.33
Pharmacy (prescription or nonprescription)	\$1,122,376.48	\$38,490,596.64	\$1,088,070.45	\$76,248.00	\$40.78

Rent for a NON-University Owned Property	\$4,046,551.74	\$89,372,449.44	\$22,932,947.82	\$3,037,212.00	\$119.39
Restaurants	\$5,632,271.99	\$16,359,492.00	\$5,455,257.31	\$1,571,556.00	\$29.02
Landline Telephone	\$277,724.70	\$213,823.20	\$78,251.64	\$42,360.00	\$0.61
Local Transportation	\$1,242,492.87	\$2,190,679.20	\$693,085.97	\$0.00	\$4.13
Water and Sewer	\$834,258.82	\$3,915,183.48	\$2,068,079.10	\$220,272.00	\$7.04
Live Performances	\$476,296.78	\$1,192,568.64	\$474,726.63	\$186,384.00	\$2.33
Museums	\$30,671.28	\$133,942.08	\$102,845.01	\$0.00	\$0.27
Total	\$47,766,930.33	\$306,783,998.49	\$88,298,983.66	\$10,618,804.80	\$453.5

Source: Center for Business and Economic Research Calculations

Tax Payments by Students of the University of Arkansas

Students that reside in Northwest Arkansas contribute significant amounts to local taxes. Specifically, students pay property taxes on real estate and personal property, sales and use taxes, and utility taxes, among others. Researchers from the Center for Business and Economic Research were able to estimate some real estate and personal property taxes based on information from surveys.

The tables below show the estimated real estate and personal property taxes paid in Washington County and Northwest Arkansas by students at the University of Arkansas. Respondents to the surveys were asked to estimate the value of their houses and vehicles registered in Northwest Arkansas. Analysis of survey results indicate that 5.7 percent, or 1,566 students, own houses in Northwest Arkansas. These 1,566 students paid an estimated \$3.5 million in real estate taxes (or 1.1 percent of total real estate tax collections) to Benton and Washington counties in Arkansas. Students in Washington County paid \$2.8 million in real estate taxes which represented 2.0 percent of the total county real estate tax collections. Additionally, similar estimates from the survey show that students at the University of Arkansas own 15,126 vehicles that are registered in Benton and Washington counties in Northwest Arkansas. The personal property taxes associated with these vehicles amounted to \$1.5 million across the two counties or 1.4 percent of the total personal property taxes collected. Of the cars registered in Northwest Arkansas, 95.3% were registered in Washington County. These 14,412 cars registered in Washington County paid nearly \$1.4 million in personal property taxes or 3.1 percent of the total personal property taxes collected. The taxes collected from students at the University of Arkansas contribute a significant portion towards the local cost of education and other services rendered by the cities and counties in the area.

Table 11: University of Arkansas Student Property Taxes in Washington County

University of Arkansas Student Property Taxes in Washington County		
Tax Category	Property Taxes Paid in Washington County	% of Respective Taxes Collected in Washington County
Houses of Students	\$2,773,903.28	2.0%
Vehicles of Students	\$1,424,655.09	3.1%

Source: Center for Business and Economic Research Estimates

Table 12: University of Arkansas Student Property Taxes in Northwest Arkansas

University of Arkansas Student Property Taxes in Northwest Arkansas		
Tax Category	Property Taxes Paid in Northwest Arkansas	% of Respective Taxes Collected in Northwest Arkansas
Houses of Students	\$3,510,125.53	1.1%
Vehicles of Students	\$1,516,086.83	1.4%

Source: Center for Business and Economic Research Estimates

Impact of New Non-University Student Housing

The student body at the University of Arkansas grew a significant 5.0 percent from 26,237 in 2014 to 27,558 in 2018. With this growth came an increased need for housing in Fayetteville that was convenient for students. While the University built new residence halls to accommodate more students, private companies also responded to the increased enrollment by building several large-scale apartment complexes. These large-scale apartment complexes built since 2014 are worth more than \$219.2 million and added more than 2.5 million square feet in additional student housing space. While the impacts associated with the construction of these apartment complexes are not included in the University's economic impact, their construction occurred as a direct result of the increased enrollment at the University. The table below lists the new large-scale apartment complexes and their value as determined by the county property assessment.

Table 13: New Non-University Student Housing

New Non-University Student Housing			
Name	Year built	Square Feet	Property Value
The Avenue	2019	455,449	\$46,130,936
Cottages at Hollywood	2019	246,881	\$28,049,078
Atmosphere	2016	458,448	\$16,222,900
Gather Dickson	2016	143,603	\$12,866,450
Champions Club	2016	102,676	\$8,651,550
The District	2016	446,387	\$57,000,000
Beechwood	2015	323,048	\$25,121,450
The Cardinal	2014	388,400	\$25,134,958
Total		2,564,892	\$219,177,322

Source: Center for Business and Economic Research, Washington County

Economic Activity Generated by Visitors Affiliated with the University of Arkansas

To accurately portray some of the indirect spending associated with the University of Arkansas, researchers from the Center for Business and Economic Research estimated expenditures of visitors affiliated with the University of Arkansas. The University of Arkansas attracts many visitors to Northwest Arkansas through five major categories identified by researchers at the Center. The categories of visitors are: visitors to various athletic events, visitors to students, visitors to the Office of Admissions, visitors to the Garvan Woodland Gardens, and visitors to the various camps and conferences at the University of Arkansas³. Spending information was not available for visitors to camps and conferences at the University of Arkansas. Visitors included in the estimation come from outside the Fayetteville-Springdale-Rogers MSA, as spending from local residents does not add to the total expenditures in the area. Similar adjustments were made for visitors to athletic events, visitors to Little Rock, and visitors to the Gardens in Hot Springs. Spending by local visitors typically replaces other spending in the local area.

Spending by Visitors to Students of the University of Arkansas

Students at the University of Arkansas were surveyed during the spring of 2018 to determine the number of their visitors and their duration of stay. The survey asked respondents about the number of visitors in the past year, their length of stay in a Northwest Arkansas hotel or motel, and the total spent on a variety of activities. The average number of visitor nights was calculated from the respondents to the surveys as well as the percentage of students that had visitors who stayed in local hotels or motels. A short summary of the survey results is in the table below.

The percentage of the survey respondents who had visitors staying in local hotels and motels was multiplied by the entire local student body to estimate the total number with overnight visitors in local hotels and motels. This figure was then multiplied by the average number of visitor nights obtained from survey respondents to estimate the total visitor nights spent in Northwest Arkansas hotels and motels by guests. Spending by these visitors was assumed to cost \$91 per night, which is the per diem expenditure allowed for the region for a hotel stay⁴. To estimate the total amount spent on other activities, researchers multiplied the percentage of survey respondents participating in each category by the total local student body. This figure was then multiplied by the average dollar spent on each activity. The total visitor expenditure, then, is calculated by adding the cost of staying in hotels and the dollar spent on the other activities. Visitors to the University of Arkansas spent \$52.3 million in the local economy. These visitors paid \$3.4 million in state sales taxes and \$1.7 million in local sales taxes.

Table 14: University of Arkansas Student Visitor Spending

University of Arkansas Student Visitor Spending					
	Freshmen	Other Undergraduates	Graduate Students	Law Students	Total
Students with Visitors	5,295	15,196	3,167	282	23,658
Hotel Room Nights	6,063	15,936	3,788	353	25,787
Total Visitor Expenditures	\$8,808,981.25	\$35,006,219.30	\$8,486,383.14	\$615,420.20	\$52,301,583.69

Source: Center for Business and Economic Research Survey Data

Spending by Visitors to the University of Arkansas Office of Admissions

Parents, guardians, and siblings of students from around the state and surrounding regions visit the University of Arkansas as high school students decide on which university to attend. The process for admissions and related tours brought 15,761 visitors to campus in the 2017-18 academic year. For planning purposes, the University of Arkansas Admissions office assumes each visitor represents 1.5 people (to account for students who may or may not attend with parents/guardians/siblings). Researchers from the Center for Business and Economic Research used the same multiplier to estimate the impact of the Office of Admissions visitors to the University of Arkansas. The figure also does not include visitors that did not use the Office of Admissions official tour for a visit to the University⁵.

When estimating overnight stays, researchers from the Center used a conservative assumption that only visitors coming from distances greater than 150 miles would spend the night in Northwest Arkansas. Using the per diem expenditure of \$144, researchers estimate that the 10,971 overnight visitors to the Office of Admissions spent approximately \$1.6 million in the local economy. The 4,790 visitors coming from distances of 150 or fewer miles were assumed to have only spent money on lunch and incidentals valued at \$17⁶. These visitors spent a total of \$81,422 in the local economy. Overall, visitors to the Office of Admissions spent \$1.7 million in the local economy and paid state sales taxes of \$107,981 and local sales taxes of \$53,990 (using a 3.25 percent average local sales tax rate).

Table 15: Visitor Information from the Office of Admissions

Visitor Information from the Office of Admissions			
Distance from the University of Arkansas	Number of Visitors	Spending	Total Spending
50 miles or fewer miles	1,922	\$17.00	\$32,666
51-150 miles	2,868	\$17.00	\$48,756
151-300 miles	8,226	\$144.00	\$1,184,544
301 or more miles	2,745	\$144.00	\$395,280
Total	15,761		\$1,661,246

Source: Center for Business and Economic Research Survey Data

Spending by University of Arkansas Conference Attendees

Further demonstrating how the University of Arkansas impacts the local economy, is the effect of conferences and camps whose participants are housed on campus. There is a wide range of programs that use housing on the University Campus. There are academic programs, arts programs, athletic programs, and the Walmart Shareholders event. Visitors come to the University of Arkansas from all over the world to participate in the programs that are offered. Participants at the camps and conferences pay for housing and meals with the University and the impact of this is captured within the University's spending. In addition to this, camp and conference attendees in many instances spend additional money off campus in the local economy as part of their travel. Researchers from the Center for Business and Economic Research were unable to find reasonable estimates of such spending off campus and therefore their impact on the local economy is unknown.

Data gathered from University Housing⁷, shown in the table below, lists the number of participants by camp or conference. In all, during the 2017-18 academic year, 11,135 participants visited the University of Arkansas for various camps and conferences. If these attendees spent a conservative estimate of \$10 in the local economy during their stay, their total impact would be \$111,350.

Table 16: Visitors to Conferences and Camps Hosted by University Housing

Visitors to Conferences and Camps Hosted by University Housing	
Conference	Number of Attendees
Geoscience	8
FLL Razorback Invitational	672
REU	49
Heyes Summer Chemistry Workshop	9
SPPARK	15
Walmart	4555
Upward Bound Summer Bridge Program	27
ECAP	31
Business Leadership Academy	24
ACT Academy Session	283
OR	1362
University of Arkansas Livestock Judging Camp	43
TheatreSquared	4
Native Youth in Food and Agriculture Leadership Summit	39
Math, Science, and Engineering Academy (M-SEA)	29
KIPP academy	30
Design Camp	68
Technology Awareness Program	15
Community Music School Camp	29
Guest Housing	1
Chad Morris Football Camps	140

Upward Bound Summer Academy	146
R.O.C.K Camp Adventure	29
NEH Summer Institute for School Teachers: Remaking Monsters and Heroines	33
Fleischer Scholars Program	45
Razorback Basketball 43rd Annual Overnight Camp	106
George N. Parks Drum Major Academy	85
Arkansas Gymnastics Camp for Girls, LLC	176
ASAP	123
Engineering Math Acceleration Program	19
Arkansas Academy for Educational Equity	13
SEP	17
Jr. High Band Camp: Participants & Counselors	663
Jr. High/Sr. High Band Camp: Staff	38
Food Science	9
VolleyHogs Team Camp	232
Poultry Science Youth Conference	26
Sr. High Band Camp: Participants and Counselors	419
(IYLEP) Iraqi Young Leaders Exchange Program	23
Biomedical Research Girls Camp	23
ACAP	25
Advanced Placement Summer Institute (APSI)	73
Arkansas Soccer Camp	96
Engineering Summer Academy	79
UCA Cheer Camp	113
4H O-Rama	477
LDSSA Youth Conference	503
NCA Cheer Camp	111
Total	11,135

Source: University of Arkansas Housing

Spending by Visitors to the University of Arkansas Garvan Woodland Gardens

Part of the Fay Jones School of Architecture, Garvan Woodland Gardens is a 210-acre botanical garden located in Hot Springs, Arkansas, that attracts visitors from all over the world⁸. To estimate the number of visitors from within a certain distance of the Gardens, researchers at the Center multiplied the latest ratio of visits in each category, collected from zip-code data, with the total number of visitors over one year⁹. In all, there were 182,045 visitors to Garvan Woodland Gardens between July 2017 to June 2018.

When estimating overnight stays, researchers from the Center used a conservative assumption that only visitors coming from distances greater than 150 miles would spend the night in Garland County. Using the per diem expenditure of \$104 for Hot Springs, researchers estimate that the 57,378 overnight visitors to Garvan Woodland Gardens spent approximately \$6.0 million in the local economy. The 124,667 visitors coming from distances 150 miles or fewer were assumed to have only spent money on

lunch and incidentals valued at \$20¹⁰. These visitors spent a total of \$2.5 million in the local economy. Overall, visitors to the Garvan Woodland Gardens spent \$8.5 million in the local economy and paid state sales taxes of \$549,943 and local sales taxes of \$253,820 (using a 3.0 percent average local sales tax rate).

Table 17: Visitor Information from Garvan Woodland Gardens

Visitor Information from Garvan Woodland Gardens			
Distance from Garvan Woodland Gardens	Number of Visitors	Spending	Total Spending
50 or fewer miles	91,703	\$20.00	\$1,834,069.33
51-150 miles	32,963	\$20.00	\$659,268.88
151-300 miles	24,258	\$104.00	\$2,522,806.69
300 or more miles	33,120	\$104.00	\$3,444,514.65
Total	182,045		\$8,460,659.54

Source: Garvan Woodland Gardens

Spending of Razorback Athletic Events Visitors

One of the most visible kinds of visitor to the University of Arkansas campus is someone who comes to enjoy Razorback athletic events. Nearly 609,000 fans attended home baseball, basketball, and football games during the 2017-18 baseball and basketball season and 2018-19 football season and about 290,000 of those fans were visitors whose homes were outside Northwest Arkansas. These fans generate substantial expenditures at restaurants, hotels, retail, and gasoline stores, providing an important stimulus to the Northwest Arkansas economy. This section of the report captures the off-campus Northwest Arkansas spending of fans associated with home baseball, basketball, and football games during the 2017-18 and 2018-19 academic years. The spending estimates of fans attending these games do not include any expenditures made in purchasing tickets to the games or merchandise, and concessions purchased at the stadiums and arenas, as these expenditures are explained in detail another section. In addition, the spending of fans attending other sports such as women’s basketball, soccer, gymnastics and other sports is not captured in this study.

Estimating spending in Northwest Arkansas by visitors at the home games was achieved through the collection of primary data from visitors in the form of survey responses. Researchers from the Center conducted a detailed study measuring the off-campus spending of fans using the most up-to-date data available.

Visitors to home football games were surveyed in the parking lots and tailgating venues during the three hours before each home game in the fall of 2018. Researchers from the Center for Business and Economic Research developed a survey instrument that captured the economic activities of visitors to the home games and University of Arkansas students surveyed people at the games using this survey instrument. A copy of the survey instrument is provided in the Appendix.

The students surveyed baseball and basketball patrons for an hour prior to the game and during a part of the game, as well. Baseball and basketball visitors were surveyed near the parking lots prior to the

game and in the arena/stadium concourses during a part of the games. The data collected during the survey process included the origin (hometown) of the game attendee (only patrons from outside Northwest Arkansas were given the full survey), the size of the attending party, the lodging arrangements of the party, the meals eaten by the party, other plans for each party and the total spending by visitors to the area. Baseball fan spending for the 2017-18 academic year was estimated using survey responses and attendance records for that academic year. Basketball fan spending for the 2017-18 academic year was extrapolated from the fall 2011 survey using 2017-18 attendance. Football fan spending was estimated using survey responses and attendance records for the 2018-19 academic year¹¹. The extrapolated data on visitor spending are presented separately for each sport surveyed.

Spending from Visitors to Razorback Baseball Games

Students from the Center for Business and Economic Research were present at twelve baseball games to survey patrons that were attending the games. In the event of a double header, only the first game was surveyed. The range of games surveyed allowed researchers from the Center to get spending data for various days of the week and this information was used to extrapolate spending estimates for games that were not surveyed based on the day of the week. Surveyors were also able to collect information on conference and non-conference games, so spending patterns from these types of games were also used when extrapolating spending for games that were not surveyed. Non-conference games were played on several days of the week, but conference home games were only played on weekends, with the exception of one game played on a Thursday. In all, there were 29 game days with home baseball games in Fayetteville during the 2017-2018 season. Short summaries are provided for each of the individual games surveyed, followed by detailed tables on spending estimates for every home baseball game.

Summary of Survey Results: Non-Conference Friday Games

According to information gathered by the Center for Business and Economic Research, 24.8 percent of game attendees were from outside Northwest Arkansas. This means that of the 12,943 individuals who attended the game, **3,206 were from outside Northwest Arkansas**. The average visitor from outside Northwest Arkansas spent \$178.36 during the visit. Center researchers estimate that these individuals spent a total of **\$571,822** in the Northwest Arkansas economy. The out-of-region visitors used **3,684 hotel or motel room nights**.

Summary of Survey Results: Non-Conference Saturday Games

According to data collected 30.2 percent of game attendees were from outside Northwest Arkansas. This means that of the 12,193 individuals who attended the game, **3,680 were from outside Northwest Arkansas**. The average visitor from outside Northwest Arkansas spent \$153.18 during the visit. Center researchers estimate that these individuals spent a total of **\$563,702** in the Northwest Arkansas economy. The out-of-region visitors used **2,919 hotel or motel room nights**.

Summary of Survey Results: Non-Conference Sunday Games

Data showed that 31.5 percent of game attendees were from outside Northwest Arkansas. This means that of the 9,040 individuals who attended the game, **2,851 were from outside Northwest Arkansas**. The average visitor from outside Northwest Arkansas spent \$109.29 during the visit. Center researchers

estimate that these individuals spent a total of **\$311,586** in the Northwest Arkansas economy. The out-of-region visitors used **1,104 hotel or motel room nights**.

Summary of Survey Results: Non-Conference Weekday Games

According to data collected 28.3 percent of game attendees were from outside Northwest Arkansas. This means that of the 23,299 individuals who attended the games, **6,586 were from outside Northwest Arkansas**. The average visitor from outside Northwest Arkansas spent \$156.85 during the visit. Center researchers estimate that these individuals spent a total of **\$1,033,171** in the Northwest Arkansas economy. The out-of-region visitors used **3,965 hotel or motel room nights**.

Summary of Survey Results: Conference Friday Games

According to information gathered by the Center for Business and Economic Research, 32.5 percent of game attendees were from outside Northwest Arkansas. This means that of the 23,172 individuals who attended the game, **7,530 were from outside Northwest Arkansas**. The average visitor from outside Northwest Arkansas spent \$178.36 during the visit. Center researchers estimate that these individuals spent a total of **\$1,343,051** in the Northwest Arkansas economy. The out-of-region visitors used **8,653 hotel or motel room nights**.

Summary of Survey Results: Conference Saturday Games

Data showed 39.5 percent of game attendees were from outside Northwest Arkansas. This means that of the 30,727 individuals who attended the games, **12,141 were from outside Northwest Arkansas**. The average visitor from outside Northwest Arkansas spent \$153.18 during the visit. Center researchers estimate that these individuals spent a total of **\$1,859,605** in the Northwest Arkansas economy. The out-of-region visitors used **9,629 hotel or motel room nights**.

Summary of Survey Results: Conference Sunday Games

According to data collected 34.3 percent of game attendees were from outside Northwest Arkansas. This means that of the 13,486 individuals who attended the games, **4,623 were from outside Northwest Arkansas**. The average visitor from outside Northwest Arkansas spent \$109.29 during the visit. Center researchers estimate that these individuals spent a total of **\$505,357** in the Northwest Arkansas economy. The out-of-region visitors used **1,790 hotel or motel room nights**.

Summary of Survey Results: Conference Weekday Games

According to information gathered by the Center for Business and Economic Research, 32.3 percent of game attendees were from outside Northwest Arkansas. This means that of the 4,878 individuals who attended the game, **1,574 were from outside Northwest Arkansas**. The average visitor from outside Northwest Arkansas spent \$226.24 during the visit. Center researchers estimate that these individuals spent a total of \$356,102 in the Northwest Arkansas economy. The out-of-region visitors used **948 hotel or motel room nights**.

2017-2018 Attendance at Razorback Baseball Games

Using the information from the surveys above, researchers from the Center were able to provide estimates of the number of visitors at home baseball games that came from outside Northwest Arkansas. On average, for non-conference home baseball games, 28.3 percent of game attendees on weekdays came from outside Northwest Arkansas, 24.8 percent of attendees on Fridays, 30.2 percent on Saturdays, and 31.5 percent on Sundays came from outside Northwest Arkansas. Similarly, 32.3 percent of weekday attendees at conference games, 32.5 percent of Friday attendees at conference games, 39.5 percent of Saturday attendees at conference games, and 34.3 percent of Sunday attendees at conference games came from outside Northwest Arkansas. In all, of the 129,738 attendees at all home baseball games during the 2017-2018 season, 42,191 or 35.5 percent of attendees came from outside Northwest Arkansas.

Table 18: 2017-2018 Attendance at Razorback Baseball Games

2017-2018 Attendance at Razorback Baseball Games					
Date	Opponent	Attendees from NWA	Attendees from Outside NWA	Percentage from Outside NWA	Total Attendees
16-Feb	Bucknell	2,562	925	26.5%	3,487
17-Feb	Bucknell	2,156	1,020	32.1%	3,176
18-Feb	Bucknell	2,600	1,178	31.2%	3,778
28-Feb	Dayton	691	287	29.4%	978
1-Mar	Dayton	1,192	444	27.1%	1,636
2-Mar	Southern California	3,230	1,132	26.0%	4,362
3-Mar	Southern California	6,357	2,660	29.5%	9,017
4-Mar	Southern California	1,950	949	32.7%	2,899
9-Mar	Kent State	3,945	1,149	22.6%	5,094
9-Mar	Kent State (DH)	-	-	-	-
11-Mar	Kent State	1,639	724	30.6%	2,363
13-Mar	Texas	2,849	1,296	31.3%	4,145
14-Mar	Texas	2,895	1,321	31.3%	4,216
16-Mar	Kentucky	3,867	1,879	32.7%	5,746
17-Mar	Kentucky	4,570	3,157	40.9%	7727
17-Mar	Kentucky (DH)	-	-	-	-
3-Apr	Louisiana Monroe	850	362	29.8%	1,212
4-Apr	Louisiana Monroe	1,076	449	29.4%	1,525
6-Apr	Auburn	1,776	983	35.6%	2,759
7-Apr	Auburn	2,291	1,427	38.4%	3718
8-Apr	Auburn	1,824	857	32.0%	2,681

12-Apr	South Carolina	3,304	1,574	32.3%	4878
14-Apr	South Carolina	3,254	1,542	32.2%	4796
14-Apr	South Carolina (DH)	-	-	-	-
17-Apr	Missouri State	3,024	1,145	27.5%	4,169
24-Apr	Texas Tech	4,135	1,283	23.7%	5,418
25-Apr	Texas Tech (Cancelled)	-	-	-	-
27-Apr	Alabama	5,505	2,193	28.5%	7,698
28-Apr	Alabama	4,707	3,172	40.3%	7879
29-Apr	Alabama	3,849	2,030	34.5%	5,879
11-May	Texas A&M	4,494	2,475	35.5%	6,969
12-May	Texas A&M	3,765	2,842	43.0%	6607
13-May	Texas A&M	3,189	1,737	35.3%	4,926
TOTAL		87,547	42,191	32.5%	129,738

Source: Center for Business and Economic Research Surveys and Estimates
(DH) Indicates doubleheader

Spending by Visitors to Razorback Baseball Games

Data collected from the surveys provided per person estimates of spending by visitors from outside Northwest Arkansas. On average, visitors at non-conference games spent \$156.85 on weekdays and \$178.36 on Fridays, \$153.18 on Saturdays, and \$109.29 on Sunday game days. Meanwhile visitors at conference games spent \$226.24 on weekdays and \$178.36 on Fridays, \$153.18 on Saturdays, and \$109.29 on Sunday game days. When these data are extrapolated to reflect the spending patterns of 42,191 visitors from outside Northwest Arkansas, the visitors spent \$6,544,396 in the Northwest Arkansas economy or an average of \$225,669 per game. This spending only includes the expenditures of attendees outside the baseball stadium and, as such, does not include spending on tickets, merchandise and concessions.

Table 19: 2017-2018 Spending by Visitors at Razorback Baseball Games

2017-2018 Spending by Visitors at Razorback Baseball Games			
	Opponent	Average Spending Per Person	Total Spending for all Visitors
16-Feb	Bucknell	\$178.36	\$164,983.00
17-Feb	Bucknell	\$153.18	\$156,243.60
18-Feb	Bucknell	\$109.29	\$128,743.62
28-Feb	Dayton	\$156.85	\$45,015.95
1-Mar	Dayton	\$156.85	\$69,641.40
2-Mar	Southern California	\$178.36	\$201,903.52
3-Mar	Southern California	\$153.18	\$407,458.80
4-Mar	Southern California	\$109.29	\$103,716.21
9-Mar	Kent State	\$178.36	\$204,935.64

9-Mar	Kent State (DH)	-	-
11-Mar	Kent State	\$109.29	\$79,125.96
13-Mar	Texas	\$156.85	\$203,277.60
14-Mar	Texas	\$156.85	\$207,198.85
16-Mar	Kentucky	\$178.36	\$335,138.44
17-Mar	Kentucky	\$153.18	\$483,589.26
17-Mar	Kentucky (DH)	-	-
3-Apr	Louisiana Monroe	\$156.85	\$56,779.70
4-Apr	Louisiana Monroe	\$156.85	\$70,425.65
6-Apr	Auburn	\$178.36	\$175,327.88
7-Apr	Auburn	\$153.18	\$218,587.86
8-Apr	Auburn	\$109.29	\$93,661.53
10-Apr	Grambling State (NLR)	-	-
12-Apr	South Carolina	\$226.24	\$356,101.76
14-Apr	South Carolina	\$153.18	\$236,203.56
14-Apr	South Carolina (DH)	-	-
17-Apr	Missouri State	\$156.85	\$179,593.25
24-Apr	Texas Tech	\$156.85	\$201,238.55
25-Apr	Texas Tech (Cancelled)	-	-
27-Apr	Alabama	\$178.36	\$391,143.48
28-Apr	Alabama	\$153.18	\$485,886.96
29-Apr	Alabama	\$109.29	\$221,858.70
11-May	Texas A&M	\$178.36	\$441,441.00
12-May	Texas A&M	\$153.18	\$435,337.56
13-May	Texas A&M	\$109.29	\$189,836.73
AVERAGE		\$155.11	\$225,668.83
TOTAL			\$6,544,396.02

Source: Center for Business and Economic Research Surveys and Estimates
(DH) Indicates doubleheader

Sales Taxes Paid by Visitors to Razorback Baseball Games

Using the visitor spending data above, researchers were able to estimate the sales taxes paid by visitors to the Northwest Arkansas area who were attending home baseball games. For the purpose of this study, the spending per game was used to calculate sales taxes accrued to the state at the sales tax rate of 6.5 percent and the sales taxes accrued to county and local governments in Northwest Arkansas at an average rate of 3.25 percent. The estimate provide below is conservative as some localities have additional taxes collected for hotel and motel rooms and prepared food purchased. In addition, liquor excise taxes and gasoline taxes are also not estimated. The 42,191 visitors paid \$387,595 in state sales taxes and \$193,798 in local sales taxes for a total of \$581,393 in sales tax dollars for this region.

Table 20: 2017-2018 Sales Tax Paid by Visitors at Razorback Baseball Games

2017-2018 Sales Tax Paid by Visitors at Razorback Baseball Games				
	Opponent	State Taxes	Local Taxes	Total Taxes
16-Feb	Bucknell	\$9,771.20	\$4,885.60	\$14,656.80
17-Feb	Bucknell	\$9,253.61	\$4,626.80	\$13,880.41
18-Feb	Bucknell	\$7,624.91	\$3,812.45	\$11,437.36
28-Feb	Dayton	\$2,666.09	\$1,333.05	\$3,999.14
1-Mar	Dayton	\$4,124.55	\$2,062.27	\$6,186.82
2-Mar	Southern California	\$11,957.84	\$5,978.92	\$17,936.76
3-Mar	Southern California	\$24,131.96	\$12,065.98	\$36,197.93
4-Mar	Southern California	\$6,142.65	\$3,071.32	\$9,213.97
9-Mar	Kent State	\$12,137.42	\$6,068.71	\$18,206.13
9-Mar	Kent State (DH)	-	-	-
11-Mar	Kent State	\$4,686.28	\$2,343.14	\$7,029.41
13-Mar	Texas	\$12,039.22	\$6,019.61	\$18,058.83
14-Mar	Texas	\$12,271.46	\$6,135.73	\$18,407.19
16-Mar	Kentucky	\$19,848.75	\$9,924.37	\$29,773.12
17-Mar	Kentucky	\$28,640.82	\$14,320.41	\$42,961.23
17-Mar	Kentucky (DH)	-	-	-
3-Apr	Louisiana Monroe	\$3,362.81	\$1,681.40	\$5,044.21
4-Apr	Louisiana Monroe	\$4,171.00	\$2,085.50	\$6,256.49
6-Apr	Auburn	\$10,383.88	\$5,191.94	\$15,575.83
7-Apr	Auburn	\$12,945.98	\$6,472.99	\$19,418.97
8-Apr	Auburn	\$5,547.15	\$2,773.58	\$8,320.73
10-Apr	Grambling State (NLR)	-	-	-
12-Apr	South Carolina	\$21,090.31	\$10,545.15	\$31,635.46
14-Apr	South Carolina	\$13,989.28	\$6,994.64	\$20,983.92
14-Apr	South Carolina (DH)	-	-	-
17-Apr	Missouri State	\$10,636.50	\$5,318.25	\$15,954.75
24-Apr	Texas Tech	\$11,918.46	\$5,959.23	\$17,877.68
25-Apr	Texas Tech (Cancelled)	-	-	-
27-Apr	Alabama	\$23,165.67	\$11,582.84	\$34,748.51
28-Apr	Alabama	\$28,776.90	\$14,388.45	\$43,165.36
29-Apr	Alabama	\$13,139.70	\$6,569.85	\$19,709.54
11-May	Texas A&M	\$26,144.57	\$13,072.28	\$39,216.85
12-May	Texas A&M	\$25,783.09	\$12,891.55	\$38,674.64
13-May	Texas A&M	\$11,243.18	\$5,621.59	\$16,864.77
Total		\$387,595.21	\$193,797.60	\$581,392.81

Source: Center for Business and Economic Research Surveys and Estimates

In addition, using data provided by the Athletic Department visitors and residents paid \$61,467 in sales taxes to the state and local governments on the purchases of merchandise and concessions while inside the stadium. Data was not available for merchandise sales for the end of the season due to a change in providers¹². The state sales tax of 6.5 percent is used, and the local sales tax rate used is from Fayetteville, since all merchandise and concession rates were made in Fayetteville. The local merchandise tax rate is 3.25 percent which reflects the Washington County and Fayetteville sales tax rate and the local concessions tax rate is 5.25 percent which reflects the Washington County, Fayetteville sales tax rate, and the Fayetteville prepared food tax.

Table 21: 2017-2018 Sales Tax Paid on Concessions and Merchandise at Razorback Baseball Games

2017-2018 Sales Tax Paid on Concessions and Merchandise at Razorback Baseball Games						
Game Date	Opponent	Concession State Sales Taxes	Concession Local Sales Taxes	Merchandise State Sales Taxes	Merchandise Local Sales Taxes	Total
16-Feb	Bucknell	\$589.60	\$476.22	\$233.05	\$116.53	\$1,415.40
17-Feb	Bucknell	\$619.59	\$500.43	\$363.44	\$181.72	\$1,665.18
18-Feb	Bucknell	\$911.26	\$736.01	\$359.18	\$179.59	\$2,186.04
28-Feb	Dayton	\$153.38	\$123.89	\$49.54	\$24.77	\$351.58
1-Mar	Dayton	\$231.66	\$187.11	\$68.15	\$34.07	\$520.99
2-Mar	Southern California	\$853.39	\$689.28	\$386.87	\$193.44	\$2,122.98
3-Mar	Southern California	\$1,462.35	\$1,181.13	\$878.58	\$439.29	\$3,961.35
4-Mar	Southern California	\$650.28	\$525.22	\$438.62	\$219.31	\$1,833.43
9-Mar	Kent State	\$459.88	\$371.44	\$147.92	\$73.96	\$1,053.20
9-Mar	Kent State (DH)	-	-	-	-	-
11-Mar	Kent State	\$463.14	\$374.08	\$199.22	\$99.61	\$1,136.05
13-Mar	Texas	\$849.79	\$686.37	\$272.84	\$136.42	\$1,945.42
14-Mar	Texas	\$931.34	\$752.24	\$344.70	\$172.35	\$2,200.63
16-Mar	Kentucky	\$1,467.47	\$1,185.27	\$472.18	\$236.09	\$3,361.01
17-Mar	Kentucky	\$1,116.15	\$901.51	\$531.61	\$265.80	\$2,815.07
17-Mar	Kentucky (DH)	-	-	-	-	-
3-Apr	Louisiana Monroe	\$235.95	\$190.57	\$63.86	\$31.93	\$522.31
4-Apr	Louisiana Monroe	\$354.56	\$286.37	\$71.43	\$35.71	\$748.07
6-Apr	Auburn	\$601.94	\$486.18	\$274.25	\$137.12	\$1,499.49
7-Apr	Auburn	\$849.96	\$686.50	\$299.78	\$149.89	\$1,986.13
8-Apr	Auburn	\$583.27	\$471.10	\$301.27	\$150.64	\$1,506.28
10-Apr	Grambling State (NLR)	\$0.00	\$0.00	\$301.27	\$150.64	\$451.91
12-Apr	South Carolina	\$1,439.05	\$1,162.31	\$246.02	\$123.01	\$2,970.39
14-Apr	South Carolina	\$576.98	\$466.02	\$426.17	\$213.09	\$1,682.26
14-Apr	South Carolina (DH)	-	-	-	-	-
17-Apr	Missouri State	\$1,047.47	\$846.03	-	-	\$1,893.50

24-Apr	Texas Tech	\$1,064.28	\$859.61	-	-	\$1,923.89
25-Apr	Texas Tech (Cancelled)	-	-	-	-	-
27-Apr	Alabama	\$1,594.74	\$1,288.06	-	-	\$2,882.80
28-Apr	Alabama	\$2,129.33	\$1,719.84	-	-	\$3,849.17
29-Apr	Alabama	\$1,779.00	\$1,436.88	-	-	\$3,215.88
11-May	Texas A&M	\$1,978.89	\$1,598.33	-	-	\$3,577.22
12-May	Texas A&M	\$1,936.81	\$1,564.35	-	-	\$3,501.16
13-May	Texas A&M	\$1,487.16	\$1,201.17	-	-	\$2,688.33
Total		\$28,418.67	\$22,953.52	\$6,729.95	\$3,364.98	\$61,467.12

***Local sales tax rate of 5.25 percent is used on concessions and 3.25 percent is used on merchandise.**

Source: University of Arkansas Athletic Department Information and Center for Business and Economic Research Estimates

Visitors to NCAA Regional and Super Regional Baseball Games

For the 2017-2018 baseball season, Fayetteville was chosen as one of eight hosts for the NCAA Regional games and was again selected to be a host for the Super Regional games. For the Fayetteville Regional, the teams competing were Oral Roberts, Southern Miss, Dallas Baptist, and Arkansas over six games. In the Fayetteville Super Regional, Arkansas played South Carolina over three games.

Summary of Survey Results: Regional Games Against Arkansas

According to information gathered by the Center for Business and Economic Research, 50.1 percent of game attendees were from outside Northwest Arkansas. This means that of the 21,484 individuals who attended the game, **10,968 were from outside Northwest Arkansas**. The games were played at 2 PM or 7 PM on a Friday, Saturday, and Sunday. The average visitor from outside Northwest Arkansas spent \$146.96 during the visit. Center researchers estimate that these individuals spent a total of \$1,611,833 in the Northwest Arkansas economy.

Summary of Survey Results: Regional Games with Other Opponent

According to data collected by the Center for Business and Economic Research, 46.4 percent of game attendees were from outside Northwest Arkansas. This means that of the 5,045 individuals who attended the games, **2,339 were from outside Northwest Arkansas**. The games were played at 2 PM or 7 PM on a Friday, Saturday, and Sunday. The average visitor from outside Northwest Arkansas spent \$149.69 during the visit. Center researchers estimate that these individuals spent a total of \$350,131 in the Northwest Arkansas economy.

Summary of Survey Results: Super Regional Games

According to information gathered by the Center for Business and Economic Research, 40.3 percent of game attendees were from outside Northwest Arkansas. This means that of the 25,565 individuals who attended the game, **10,311 were from outside Northwest Arkansas**. The games were played early evening on Saturday, Sunday, and Monday. The average visitor from outside Northwest Arkansas spent

\$161.56 during the visit. Center researchers estimate that these individuals spent a total of \$1,665,891 in the Northwest Arkansas economy.

Attendance at NCAA Regional and Super Regional Baseball Games

Using the information above, researchers from the Center were able to provide estimates of the number of visitors at these baseball games that came from outside Northwest Arkansas. On average, for regional games when Arkansas was playing, 51.1 percent of game attendees came from outside Northwest Arkansas. Similarly, of the attendees at regional games when Arkansas was not playing, 46.4 percent of attendees came from outside Northwest Arkansas. Of the Super Regional games, 40.3 percent came from outside Northwest Arkansas. In all, of the 52,094 attendees at Regional and Super Regional baseball games during the 2017-2018 season, 23,618 or 45.3 percent of attendees came from outside Northwest Arkansas.

Table 22: 2017-2018 Attendance at NCAA Regional and Super Regional Baseball Games

2017-2018 Attendance at NCAA Regional and Super Regional Baseball Games						
Date	Game	Opponent	Attendees from NWA	Attendees from Outside NWA	Percentage from Outside NWA	Total Attendees
1-Jun	Regional Game 1	Arkansas, Oral Roberts	3,261	3,427	51.25%	6,688
1-Jun	Regional Game 2	Southern Miss, Dallas Baptist	1,029	938	47.70%	1,967
2-Jun	Regional Game 3	Dallas Baptist, Oral Roberts	818	677	45.27%	1,495
2-Jun	Regional Game 4	Arkansas, Southern Miss	3,814	4,020	51.31%	7,834
3-Jun	Regional Game 5	Dallas Baptist, Southern Miss	859	724	45.75%	1,583
3-Jun	Regional Game 6	Arkansas, Dallas Baptist	3,441	3,521	50.58%	6,962
9-Jun	Super Regional Game 1	Arkansas, South Carolina	5,486	3,730	40.47%	9,216
10-Jun	Super Regional Game 2	Arkansas, South Carolina	4,997	3,372	40.29%	8,369
11-Jun	Super Regional Game 3	Arkansas, South Carolina	4,771	3,209	40.21%	7,980
Total			28,476	23,618	45.34%	52,094

Source: Center for Business and Economic Research Surveys and Estimates

Spending by Visitors at NCAA Regional and Super Regional Baseball Games

Using data collected from the surveys for the regular baseball season, researchers at the Center estimated per person spending by visitors from outside Northwest Arkansas to NCAA Regional and Super Regional games. On average, visitors spent \$226.24 on weekdays and \$178.36 on Fridays, \$153.18 on Saturdays, and \$109.29 on Sunday game days. When these data are extrapolated to reflect the spending patterns of 23,618 visitors from outside Northwest Arkansas, the visitors spent \$3,627,855 in the Northwest Arkansas economy or an average of \$403,095 per game. This spending only includes the expenditures of attendees outside the baseball stadium and, as such, does not include spending on tickets, merchandise and concessions.

Table 23: 2017-2018 Spending by Visitors at NCAA Regional Baseball Games

2017-2018 Spending by Visitors at NCAA Regional Baseball Games				
Game Date	Game	Opponent	Average Spending per Person	Total Spending for All Visitors
1-Jun	Regional Game 1	Arkansas, Oral Roberts	\$178.36	\$611,239.72
1-Jun	Regional Game 2	Southern Miss, Dallas Baptist	\$178.36	\$167,301.68
2-Jun	Regional Game 3	Dallas Baptist, Oral Roberts	\$153.18	\$103,702.86
2-Jun	Regional Game 4	Arkansas, Southern Miss	\$153.18	\$615,783.60
3-Jun	Regional Game 5	Dallas Baptist, Southern Miss	\$109.29	\$79,125.96
3-Jun	Regional Game 6	Arkansas, Dallas Baptist	\$109.29	\$384,810.09
9-Jun	Super Regional Game 1	Arkansas, South Carolina	\$153.18	\$571,361.40
10-Jun	Super Regional Game 2	Arkansas, South Carolina	\$109.29	\$368,525.88
11-Jun	Super Regional Game 3	Arkansas, South Carolina	\$226.24	\$726,004.16
Total				\$3,627,855.35

Source: Center for Business and Economic Research Surveys and Estimates

Sales Taxes Paid by Visitors at NCAA Regional and Super Regional Games

Using the visitor spending data above, researchers were able to estimate the sales taxes paid by visitors to the Northwest Arkansas area who were attending home baseball games. For the purpose of this study, the spending per game was used to calculate sales taxes accrued to the state at the sales tax rate of 6.5 percent and the sales taxes accrued to county and local governments in Northwest Arkansas at an average rate of 3.25 percent. The estimate provided below is conservative as some localities have additional taxes collected for hotel and motel rooms and prepared food purchased. In addition, liquor excise taxes and gasoline taxes are also not estimated. The 23,618 visitors paid \$214,862 in state sales taxes and \$107,431 in local sales taxes for a total of \$322,292 in sales tax dollars for this region.

Table 24: 2017-2018 Sales Tax Paid by Visitors at NCAA Regional and Super Regional Games

2017-2018 Sales Tax Paid by Visitors at NCAA Regional and Super Regional Games					
	Game	Opponent	State Taxes	Local Taxes	Total Taxes
1-Jun	Regional Game 1	Arkansas, Oral Roberts	\$36,200.99	\$18,100.49	\$54,301.48
1-Jun	Regional Game 2	Southern Miss, Dallas Baptist	\$9,908.53	\$4,954.26	\$14,862.79
2-Jun	Regional Game 3	Dallas Baptist, Oral Roberts	\$6,141.86	\$3,070.93	\$9,212.78
2-Jun	Regional Game 4	Arkansas, Southern Miss	\$36,470.10	\$18,235.05	\$54,705.15
3-Jun	Regional Game 5	Dallas Baptist, Southern Miss	\$4,686.28	\$2,343.14	\$7,029.41
3-Jun	Regional Game 6	Arkansas, Dallas Baptist	\$22,790.57	\$11,395.29	\$34,185.86
9-Jun	Super Regional Game 1	Arkansas, South Carolina	\$33,839.17	\$16,919.59	\$50,758.76
10-Jun	Super Regional Game 2	Arkansas, South Carolina	\$21,826.13	\$10,913.07	\$32,739.20
11-Jun	Super Regional Game 3	Arkansas, South Carolina	\$42,997.97	\$21,498.98	\$64,496.95
Total			\$214,861.59	\$107,430.80	\$322,292.39
* State sales tax rate of 6.5 percent and local sales tax of 3.25 percent is used					

Source: Center for Business and Economic Research Surveys and Estimates

Spending from Visitors to Razorback Football Games

Students from the Center for Business and Economic Research were present at tailgating areas for three hours before each home football game to survey patrons that would be attending the games, including

one game in Little Rock. In all, there were six game days with home football games in Fayetteville during the 2018-19 season. Short summaries are provided for conference and non-conference games, followed by detailed tables on spending estimates for each home football game.

Summary of Survey Results: Non-Conference Games

According to information gathered by the Center for Business and Economic Research, 63.8 percent of game attendees were from outside Northwest Arkansas. This means that of the 121,754 individuals who attended the games, **77,715 were from outside Northwest Arkansas**. The average visitor from outside Northwest Arkansas spent \$124.81 during the visit. Center researchers estimate that these individuals spent a total of \$9,699,947 in the Northwest Arkansas economy. The out-of-region visitors used **46,292 hotel or motel room nights**.

Summary of Survey Results: Conference Games

According to data collected by the Center for Business and Economic Research, 64.7 percent of game attendees were from outside Northwest Arkansas. This means that of the 122,115 individuals who attended the game, **79,050 were from outside Northwest Arkansas**. The average visitor from outside Northwest Arkansas spent \$149.48 during the visit. Center researchers estimate that these individuals spent a total of \$11,816,616 in the Northwest Arkansas economy. The out-of-region visitors used **58,919 hotel or motel room nights**.

In addition to competing in Fayetteville, the University of Arkansas also plays at War Memorial Stadium in Little Rock. For the 2018-2019 season, the University of Arkansas competed against the University of Mississippi at this stadium. According to information gathered from surveyors from the Center for Business and Economic Research, 69.3 percent of game attendees were from outside Central Arkansas¹³. This means that of the 51,438 individuals who attended the game, **35,632 were from outside Central Arkansas**¹⁴. The average visitor from outside Central Arkansas spent \$118.74 during the visit. Center researchers estimate that these individuals spent a total of \$4,230,889 in the Central Arkansas economy. The out-of-region visitors used **9,377 hotel or motel room nights**.

Attendance at Razorback Football Games

Using the information above, researchers from the Center were able to provide estimates of the number of visitors at home football games that came from outside Northwest Arkansas. In all, of the 243,869 attendees at all football games held in Fayetteville during the 2018 season, 156,765 or 64.3 percent of attendees came from outside Northwest Arkansas. In addition, of the 51,438 visitors to the game hosted in Little Rock, 35,632 or 71.7 percent of attendees came from outside Central Arkansas. In all, of the 295,307 attendees at Razorback football games, 192,396, or 65.2 percent came from outside the surrounding area.

Table 25: 2018 Attendance at Razorback Football Games

2018 Attendance at Razorback Football Games					
Game Date	Opponent	Attendees from NWA	Attendees from Outside NWA	Percentage from Outside NWA	Total Attendees
1-Sep	Eastern Illinois	16,603	27,512	62.4%	44,115
15-Sep	North Texas	15,375	29,099	65.4%	44,474
6-Oct	Alabama	14,550	28,685	66.3%	43,235
13-Oct	Mississippi (LR)*	15,806	35,632	69.3%	51,438
20-Oct	Tulsa	12,061	21,104	63.6%	33,165
27-Oct	Vanderbilt	11,963	22,194	65.0%	34,157
10-Nov	Louisiana State	16,553	28,170	63.0%	44,723
Total		102,911	192,396	65.2%	295,307
*Estimates are for those from and outside of Central Arkansas					

Source: Center for Business and Economic Research Surveys and Estimates

Spending by Visitors to Razorback Football Games

Data collected from the surveys provided per person estimates of spending by visitors from outside Northwest Arkansas. On average, visitors at non-conference games spent \$124.81, and visitors at conference games spent \$149.48. When these data are extrapolated to reflect the spending patterns of 156,765 visitors from outside Northwest Arkansas, the visitors spent \$21,516,563 in the Northwest Arkansas economy or an average of \$3,586,094 per game. Visitors at the University of Mississippi game in Little Rock are estimated to have spent \$118.74, for a total of \$4,230,889 in the Central Arkansas economy. This spending only includes the expenditures of attendees outside the football stadium and, as such, does not include spending on tickets, merchandise and concessions.

Table 26: 2018 Spending by Visitors at Razorback Football Games

2018 Spending by Visitors at Razorback Football Games			
	Opponent	Average Spending Per Person	Total Spending for all Visitors
1-Sep	Eastern Illinois	\$122.64	\$3,374,071.68
15-Sep	North Texas	\$144.33	\$4,199,858.67
6-Oct	Alabama	\$130.96	\$3,756,587.60
13-Oct	Mississippi (LR)	\$118.74	\$4,230,889.19
20-Oct	Tulsa	\$100.74	\$2,126,016.96
27-Oct	Vanderbilt	\$151.97	\$3,372,822.18
10-Nov	Louisiana State	\$166.39	\$4,687,206.30
Average		\$133.83	\$3,678,207.51
Total			\$25,747,452.58

Source: Center for Business and Economic Research Surveys and Estimates

Sales Taxes Paid by Visitors

Using the visitor spending data above, researchers were able to estimate the sales taxes paid by visitors to the Northwest Arkansas area who were attending home football games. For the purpose of this study, the spending per game was used to calculate sales taxes accrued to the state at the sales tax rate of 6.5 percent and the sales taxes accrued to county and local governments in Northwest Arkansas at an average rate of 3.25 percent. To calculate the local taxes paid by visitors at the game at War Memorial, the Pulaski County sales tax rate of 1.00 percent is used. The estimate provide below is conservative as some localities have additional taxes collected for hotel and motel rooms and prepared food purchased. In addition, liquor excise taxes and gasoline taxes are also not estimated. The 192,396 total visitors paid \$1,530,151 in state sales taxes. The 156,765 visitors to Northwest Arkansas paid \$637,165 in local sales taxes and the 35,632 visitors to Central Arkansas paid \$39,357. In total, visitors paid \$2,206,673 in sales tax dollars.

Table 27: 2018 Sales Tax Paid by Visitors at Razorback Football Games

2018 Sales Tax Paid by Visitors at Razorback Football Games				
Game Date	Opponent	State Taxes Paid	Local Taxes Paid	Total Taxes Paid
1-Sep	Eastern Illinois	\$199,831.12	\$99,915.56	\$299,746.69
15-Sep	North Texas	\$248,738.78	\$124,369.39	\$373,108.17
6-Oct	Alabama	\$222,485.83	\$111,242.91	\$333,728.74
13-Oct	Mississippi (LR)	\$255,821.21	\$39,357.11	\$295,178.32
20-Oct	Tulsa	\$125,914.44	\$62,957.22	\$188,871.67
27-Oct	Vanderbilt	\$199,757.12	\$99,878.56	\$299,635.68
10-Nov	Louisiana State	\$277,602.20	\$138,801.10	\$416,403.29
Total		\$1,530,150.70	\$676,521.86	\$2,206,672.56

Source: Center for Business and Economic Research Surveys and Estimates

In addition, using data provided by the Athletic Department, visitors and residents paid \$254,525 in sales taxes to the state and local governments on the purchases of merchandise and concessions while inside the stadium. The state sales tax of 6.5 percent is used, and the local sales tax rate used is from Fayetteville, since all merchandise and concession rates were made in Fayetteville. The local merchandise tax rate is 3.25 percent which reflects the Washington County and Fayetteville sales tax rate and the local concessions tax rate is 5.25 percent which reflects the Washington County, Fayetteville sales tax rate, and the Fayetteville prepared food tax.

Table 28: 2018 Sales Tax Paid on Concessions and Merchandise at Razorback Football Games

2018 Sales Tax Paid on Concessions and Merchandise at Razorback Football Games						
Game Date	Opponent	Concession State Sales Taxes	Concession Local Sales Taxes	Merchandise State Sales Taxes	Merchandise Local Sales Taxes	Total
1-Sep	Eastern Illinois	\$22,467.32	\$18,146.68	\$5,770.68	\$2,885.34	\$49,270.01

15-Sep	North Texas	\$21,452.41	\$17,326.94	\$4,464.48	\$2,232.24	\$45,476.07
6-Oct	Alabama	\$21,150.29	\$17,082.92	\$4,653.56	\$2,326.78	\$45,213.54
13-Oct	Mississippi (LR)	-	-	-	-	-
20-Oct	Tulsa	\$15,732.86	\$12,707.31	\$4,474.98	\$2,237.49	\$35,152.64
27-Oct	Vanderbilt	\$17,494.36	\$14,130.06	\$4,090.30	\$2,045.15	\$37,759.87
10-Nov	Louisiana State	\$19,351.02	\$15,629.67	\$4,447.97	\$2,223.99	\$41,652.65
Total		\$117,648.25	\$95,023.58	\$27,901.97	\$13,950.98	\$254,524.78
*Local sales tax rate of 5.25 percent is used on concessions and 3.25 percent on merchandise.						

Source: University of Arkansas Athletic Department Information and Center for Business and Economic Research Estimates

Spending by Visitors to Razorback Basketball Games

To estimate the impact of visitors to home basketball games during the 2017-2018 season, researchers at the Center multiplied the estimated spending per person from the 2011 study to the estimated number of visitors from outside Northwest Arkansas for the current season. In all, there were 17 game days with home basketball games in Fayetteville during the 2017-2018 season. Short summaries are provided for each of the individual games surveyed, followed by detailed tables on spending estimates for every home basketball game.

Summary of Survey Results: Non-Conference Games

According to information gathered by the Center for Business and Economic Research, 32.7 percent of game attendees were from outside Northwest Arkansas. This means that of the 75,957 individuals who attended the games, **24,870 were from outside Northwest Arkansas**. The average visitor from outside Northwest Arkansas was estimated to spend \$43.49 during the visit, using data from the 2011 study. Center researchers estimate that these individuals spent a total of **\$1,081,581** in the Northwest Arkansas economy. **The out-of-region visitors used 1,580 hotel or motel room nights.**

Summary of Survey Results: Conference Games

According to data collected by the Center for Business and Economic Research, 40.2 percent of game attendees were from outside Northwest Arkansas. This means that of the 106,883 individuals who attended the game, **42,949 were from outside Northwest Arkansas**. The average visitor from outside Northwest Arkansas was estimated to spend \$43.49 during the visit, using data from the 2011 study. Center researchers estimate that these individuals spent a total of **\$1,867,847** in the Northwest Arkansas economy. **The out-of-region visitors used 2,728 hotel or motel room nights.**

Attendance at Razorback Basketball Games

Using the information above, researchers from the Center were able to estimate the number of visitors at home basketball games from outside Northwest Arkansas. In all, of the 182,840 attendees at all home

basketball games during the 2017-2018 season, 67,819, or 37.1 percent, of attendees came from outside Northwest Arkansas.

Table 29: 2017-2018 Attendance at Razorback Basketball Games

2017-2018 Attendance at Razorback Basketball Games					
Date	Opponent	Attendees from NWA	Attendees from Outside NWA	Percentage from Outside NWA	Total Attendees
10-Nov	Samford	4,964	1,886	27.5%	6,850
12-Nov	Bucknell	4,400	1,565	26.2%	5,965
17-Nov	Fresno State	7,021	3,160	31.0%	10,181
5-Dec	Colorado State	4,486	1,766	28.2%	6,252
9-Dec	Minnesota	9,424	4,950	34.4%	14,374
19-Dec	Oral Roberts	5,198	2,361	31.2%	7,559
27-Dec	CSU Bakersfield	6,094	3,145	34.0%	9,239
30-Dec	Tennessee	7,923	7,277	47.9%	15,200
10-Jan	Louisiana State	6,947	3,148	31.2%	10,095
13-Jan	Missouri	7,621	6,363	45.5%	13,984
20-Jan	Mississippi	7,794	5,256	40.3%	13,050
27-Jan	Oklahoma State	9,500	6,037	38.9%	15,537
6-Feb	South Carolina	3,956	1,758	30.8%	5,714
10-Feb	Vanderbilt	5,734	3,543	38.2%	9,277
17-Feb	Texas A&M	7,816	6,607	45.8%	14,423
20-Feb	Kentucky	8,369	5,344	39.0%	13,713
27-Feb	Auburn	7,775	3,652	32.0%	11,427
Total		115,021	67,819	37.1%	182,840

Source: Center for Business and Economic Research Surveys and Estimates

Spending by Visitors to Razorback Basketball Games

Data collected from the surveys provided per person estimates of spending by visitors from outside Northwest Arkansas. Using the estimates from the 2011-2012 study, the average visitor spent \$43.49. When these data are extrapolated to reflect the spending patterns of 67,819 visitors from outside Northwest Arkansas, the visitors spent \$2,949,428 in the Northwest Arkansas economy or an average of \$173,496 per game. This spending only includes the expenditures of attendees outside the basketball arena and, as such, does not include spending on tickets, merchandise and concessions.

Table 30: 2017-2018 Spending by Visitors at Razorback Basketball Games

2017-2018 Spending by Visitors at Razorback Basketball Games			
Date	Opponent	Average Spending Per Person	Total Spending for all Visitors
10-Nov	Samford	\$43.49	\$82,001.53
12-Nov	Bucknell	\$43.49	\$68,082.03
17-Nov	Fresno State	\$43.49	\$137,429.54
5-Dec	Colorado State	\$43.49	\$76,793.26
9-Dec	Minnesota	\$43.49	\$215,265.59
19-Dec	Oral Roberts	\$43.49	\$102,684.72
27-Dec	CSU Bakersfield	\$43.49	\$136,787.13
30-Dec	Tennessee	\$43.49	\$316,494.93
27-Feb	Auburn	\$43.49	\$158,844.38
10-Jan	Louisiana State	\$43.49	\$136,902.37
13-Jan	Missouri	\$43.49	\$276,738.58
20-Jan	Mississippi	\$43.49	\$228,564.14
27-Jan	Oklahoma State	\$43.49	\$262,537.12
6-Feb	South Carolina	\$43.49	\$76,457.48
10-Feb	Vanderbilt	\$43.49	\$154,063.86
17-Feb	Texas A&M	\$43.49	\$287,350.42
20-Feb	Kentucky	\$43.49	\$232,431.21
Average		\$43.49	\$173,495.78
Total			\$2,949,428.29

Source: Center for Business and Economic Research Surveys and Estimates

Sales Taxes Paid by Visitors to Razorback Basketball Games

Using the visitor spending data above, researchers were able to estimate the sales taxes paid by visitors to the Northwest Arkansas area who were attending home basketball games. For the purpose of this study, the spending per game was used to calculate sales taxes accrued to the state at the sales tax rate of 6.5 percent and the sales taxes accrued to county and local governments in Northwest Arkansas at an average rate of 3.25 percent. The estimate provided below is conservative as some localities have additional taxes collected for hotel and motel rooms and prepared food purchased. In addition, liquor excise taxes and gasoline taxes are also not estimated. The 67,819 visitors paid \$174,681 in state sales taxes and \$87,341 in local sales taxes for a total of \$262,022 in sales tax dollars for this region.

Table 31: 2017-2018 Sales Tax Paid by Visitors at Razorback Basketball Games

2017-2018 Sales Tax Paid by Visitors at Razorback Basketball Games				
Date	Opponent	State Taxes	Local Taxes	Total Taxes
10-Nov	Samford	\$4,856.58	\$2,428.29	\$7,284.87
12-Nov	Bucknell	\$4,032.19	\$2,016.10	\$6,048.29
17-Nov	Fresno State	\$8,139.33	\$4,069.67	\$12,209.00
5-Dec	Colorado State	\$4,548.12	\$2,274.06	\$6,822.18
9-Dec	Minnesota	\$12,749.21	\$6,374.61	\$19,123.82

19-Dec	Oral Roberts	\$6,081.56	\$3,040.78	\$9,122.33
27-Dec	CSU Bakersfield	\$8,101.29	\$4,050.64	\$12,151.93
30-Dec	Tennessee	\$18,744.57	\$9,372.29	\$28,116.86
10-Jan	Louisiana State	\$9,407.64	\$4,703.82	\$14,111.46
13-Jan	Missouri	\$8,108.11	\$4,054.06	\$12,162.17
20-Jan	Mississippi	\$16,389.98	\$8,194.99	\$24,584.98
27-Jan	Oklahoma State	\$13,536.83	\$6,768.41	\$20,305.24
6-Feb	South Carolina	\$15,548.90	\$7,774.45	\$23,323.34
10-Feb	Vanderbilt	\$4,528.23	\$2,264.12	\$6,792.35
17-Feb	Texas A&M	\$9,124.51	\$4,562.26	\$13,686.77
20-Feb	Kentucky	\$17,018.48	\$8,509.24	\$25,527.71
27-Feb	Auburn	\$13,765.86	\$6,882.93	\$20,648.79
Total		\$174,681.40	\$87,340.70	\$262,022.10

Source: Center for Business and Economic Research Surveys and Estimates

In addition, using data provided by the Athletic Department, visitors and residents paid \$91,668 in sales taxes to the state and local governments on the purchases of merchandise and concessions while inside the stadium. The state sales tax of 6.5 percent is used, and the local sales tax rate used is from Fayetteville, since all merchandise and concession rates were made in Fayetteville. The local merchandise tax rate is 3.25 percent which reflects the Washington County and Fayetteville sales tax rate and the local concessions tax rate is 5.25 percent which reflects the Washington County, Fayetteville sales tax rate, and the Fayetteville prepared food tax.

Table 32: 2017-2018 Sales Tax Paid on Concessions and Merchandise at Razorback Basketball Games

2017-2018 Sales Tax Paid on Concessions and Merchandise at Razorback Basketball Games						
Game Date	Opponent	Concession State Sales Taxes	Concession Local Sales Taxes	Merchandise State Sales Taxes	Merchandise Local Sales Taxes	Total
27-Oct	Central Oklahoma (Exhibition)	\$677.95	\$547.58	\$187.07	\$93.54	\$1,506.13
3-Nov	Missouri Western (Exhibition)	\$749.00	\$604.96	\$303.62	\$151.81	\$1,809.38
10-Nov	Samford	\$1,295.71	\$1,046.54	\$307.91	\$153.95	\$2,804.10
12-Nov	Bucknell	\$1,588.54	\$1,283.05	\$285.55	\$142.77	\$3,299.90
17-Nov	Fresno State	\$2,640.30	\$2,132.55	\$680.29	\$340.15	\$5,793.29
5-Dec	Colorado State	\$1,082.12	\$874.02	\$176.80	\$88.40	\$2,221.34
9-Dec	Minnesota	\$2,694.51	\$2,176.34	\$891.87	\$445.93	\$6,208.64
16-Dec	Troy (NLR)	-	-	\$696.74	\$348.37	\$1,045.10
19-Dec	Oral Roberts	\$1,614.86	\$1,304.31	\$647.86	\$323.93	\$3,890.95
27-Dec	CSU Bakersfield	\$2,119.85	\$1,712.18	\$523.64	\$261.82	\$4,617.49
30-Dec	Tennessee	\$3,789.31	\$3,060.59	\$1,763.32	\$881.66	\$9,494.88
10-Jan	Louisiana State	\$1,875.71	\$1,514.99	\$289.64	\$144.82	\$3,825.16
13-Jan	Missouri	\$3,030.89	\$2,448.02	\$739.96	\$369.98	\$6,588.85
20-Jan	Mississippi	\$2,595.26	\$2,096.17	\$1,040.33	\$520.16	\$6,251.91
27-Jan	Oklahoma State	\$3,037.00	\$2,452.96	\$741.85	\$370.92	\$6,602.72
6-Feb	South Carolina	\$1,620.52	\$1,308.88	\$218.27	\$109.14	\$3,256.80
10-Feb	Vanderbilt	\$2,047.18	\$1,653.49	\$574.93	\$287.46	\$4,563.05
17-Feb	Texas A&M	\$2,987.53	\$2,413.01	\$1,089.08	\$544.54	\$7,034.15
20-Feb	Kentucky	\$2,935.01	\$2,370.59	\$593.52	\$296.76	\$6,195.87
27-Feb	Auburn	\$2,205.26	\$1,781.17	\$448.05	\$224.02	\$4,658.49
Total		\$40,586.46	\$32,781.37	\$12,200.24	\$6,100.12	\$91,668.18
*Local sales tax rate of 5.25 percent is used on concessions and 3.25 percent on merchandise.						

Source: University of Arkansas Athletic Department Information and Center for Business and Economic Research Estimates

Overall Spending of Razorback Athletic Events Visitors

Nearly 609,000 fans attended home baseball, basketball, and football games during the 2017-18 baseball and basketball season and 2018-19 football season and about 290,000 of those fans were visitors whose homes were outside Northwest Arkansas. In total, visitors to home baseball, basketball, and football games spent \$34.6 million in the Northwest Arkansas economy. This spending generated state sales taxes worth \$2.1 million and local sales taxes worth \$1.0 million. An additional \$4.2 million was spent by visitors to Central Arkansas during the football game that was held in Little Rock.

Table 33: Overall Spending of Athletic Event Visitors

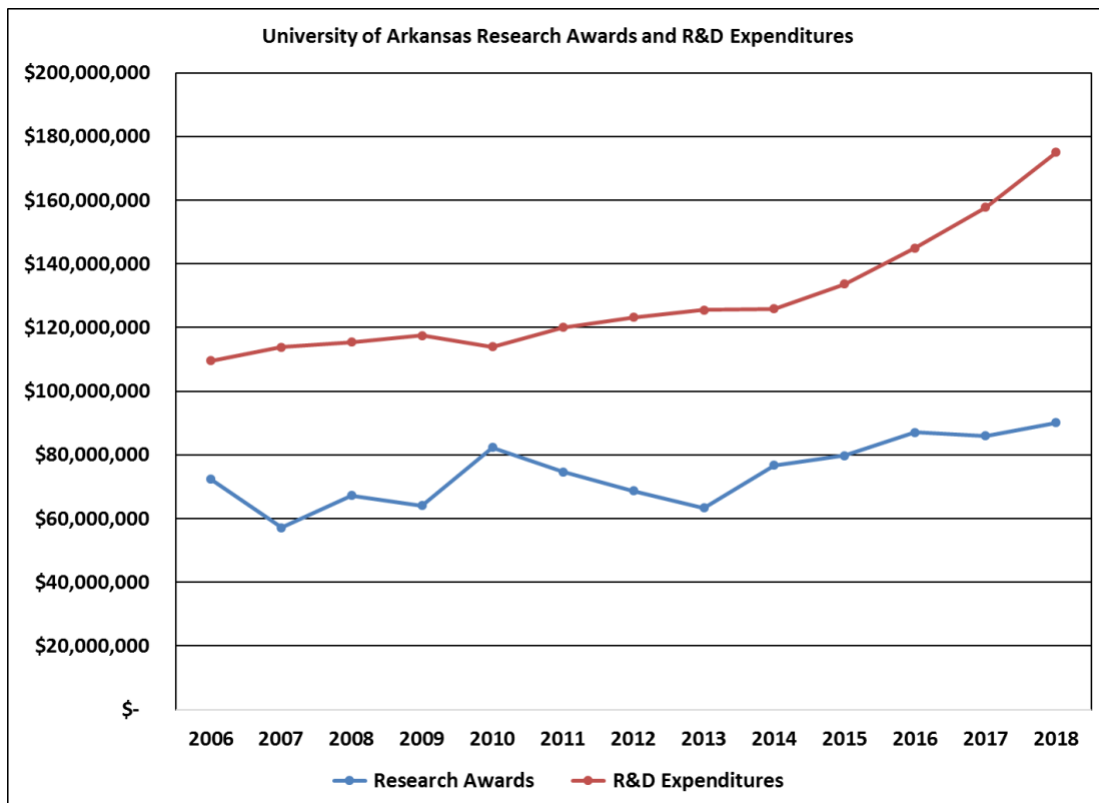
Overall Spending of Athletic Event Visitors			
Event	Number of Visitors outside of NWA	Average Visitor Spending	Total Visitor Spending
Baseball (2017-2018)	42,191	\$155.11	\$6,544,396.02
NCAA Regional, Super Regional Games (2017-2018)	23,618	\$153.61	\$3,627,855.35
Basketball (2017-2018)	67,819	\$43.49	\$2,949,428.29
Football (2018-2019)	156,764	\$137.25	\$21,516,563.39
Total	290,392		\$34,638,243.05*
*These figures only account for the games held in NWA			

Research and Economic Development Activities of the University of Arkansas

Acknowledging research and development to be the critical driver of technology-based economic development, the University of Arkansas, as the major research-oriented academic institution in the state, actively participates in the systematic creation of intellectual property through research and development as well as by providing incentives, tools and support for research and development initiatives for other entities. The University of Arkansas encourages the actual involvement of businesses and research institutions in knowledge creation and facilitates the quality of this process. These efforts result in the creation of new high-technology ventures and technological advances in the production processes of existing businesses. The expanding research network, linking the University with businesses, is targeted at solving the critical problems the world faces, developing the solutions for industries and government, and creating the intellectual potential for improving the state's long-term economic competitiveness.

In 2018, the University earned over \$90.0 million in research awards. This represents a 4.8 percent increase over the previous year and a 33.8 percent increase over ten years. Research expenditures at the University of Arkansas were at a record \$175 million in 2018, up 10.5 percent from 2017 and 51.7 percent from 2010.¹⁵

Figure 1: University of Arkansas Research Awards and R&D Expenditures



Source: University of Arkansas Research and Sponsored Programs

The University of Arkansas transfers technologies to the world through commercialization and licensing efforts that are carried about by two main units, the Arkansas Research and Technology Park, the

University of Arkansas System-Division of Agriculture Technology Commercialization Office (TCO), and Technology Ventures for the University of Arkansas. The impacts of these divisions are discussed in the following sections.

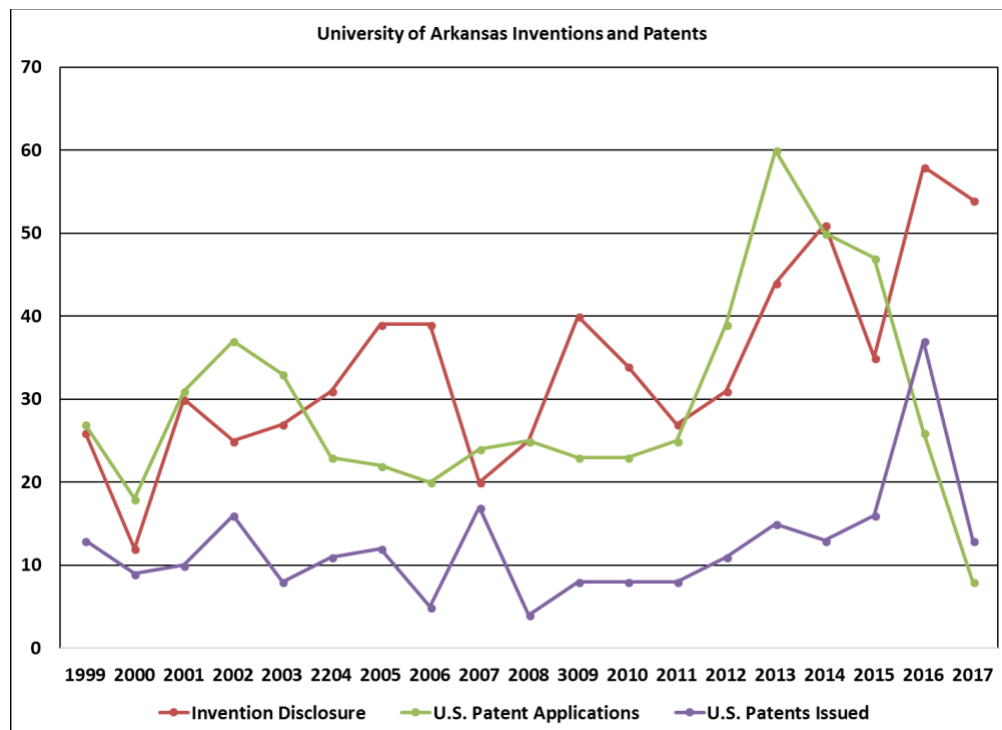
Technology Commercialization Office (TCO) and Technology Ventures

At the University of Arkansas, the advancement of intellectual property is supported by two entities: The University of Arkansas System-Division of Agriculture Technology Commercialization Office (TCO) and Technology Ventures for the University of Arkansas-Fayetteville. Both offices assist faculty and research scientists to identify, protect, and commercialize intellectual property developed from their research or other university supported activities. The TCO and Technology Ventures also engage inventors, faculty start-up/spin-out companies, and businesses in transferring inventions into the marketplace. The staff of both entities facilitate the granting of patents and licenses to university faculty and research scientists and aids the formation of start-up companies that use research produced at the University.

As the next two graphs indicate, the University of Arkansas has made some notable progress in fostering an environment where university research can lead to marketable innovation and job creation thereby, improving the state’s overall economic competitiveness. In 2017, the University received 54 invention disclosures (up from 35 in 2015), filed 8 new patent applications (down from 47 in 2015), and received 13 patent issues (down from 16 in 2015). Since 2010, the University received 334 disclosures of intellectual property, filed 278 new patent applications, and received 121 patent issues.

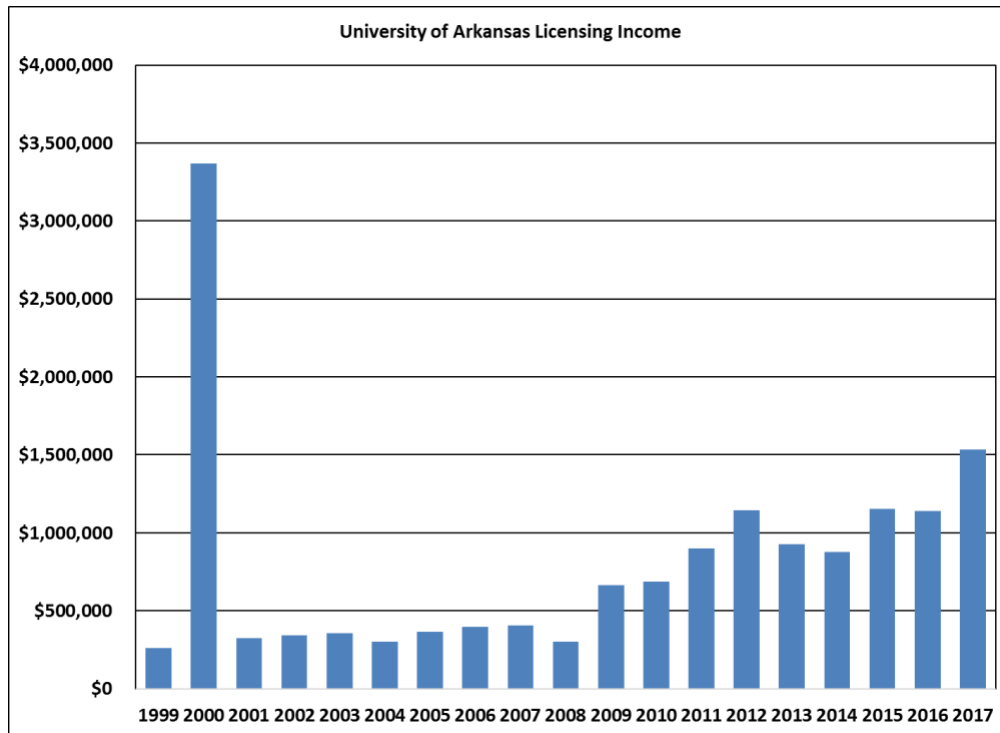
The patents produced by the University research generates significant licensing income. In the fiscal year 2017, licensing revenues of \$1.5 million were reported, up 34 percent from 2016. Since 2010, the University has accumulated \$8.3 million in licensing income.

Figure 2: University of Arkansas Inventions and Patents



Source: University of Arkansas Technology Commercialization Office and Technology Ventures

Figure 3: University of Arkansas Licensing Income



Source: University of Arkansas Technology Commercialization Office and Technology Ventures

Arkansas Research and Technology Park

The Arkansas Research and Technology Park (ARTP), situated in the city of Fayetteville, has been operated by the University of Arkansas Technology Development Foundation since 2004. The mission of the foundation is to stimulate the knowledge-based economy in Arkansas through partnerships that lead to new opportunities for learning and discovery, that build and retain a knowledge-based workforce and that spawns the development of new technologies to enrich the economic base in Arkansas. The Park assists technology-based companies to be more efficient and have higher quality products by applying knowledge and techniques developed at the University. The Park has several facilities: the Innovation Center, the Engineering Research Center, the GENESIS Technology Incubator, the HiDEC facilities, the National Center for Reliable Electronic Power Transmission, and the Enterprise Center.

Researchers from the Center for Business and Economic Research estimated the economic impact of the ARTP using data provided by the administration of the ARTP. Data provided to researchers included the annual business expenditures of tenants of the ARTP. The business expenditures of the ARTP tenants were aggregated and subtotaled based on industry descriptions provided by the NAICS code. Values of business expenditures of tenants were used as inputs to the IMPLAN input/output model, which were then used to estimate the indirect and induced effects associated with direct industry spending.

In the 2017-2018 academic year, the tenant activities of the ARTP generated an economic impact for the state of Arkansas of \$64.1 million. The tenant activities had an employment impact of 447 jobs with an

associated labor impact of \$19.6 million. Taxes generated from this economic activity contributed nearly \$2 million to state and local governments. In a separate analysis, researchers from the Center for Business and Economic Research estimated that the economic impact of tenant activities on the Northwest Arkansas region was \$61.4 million.

Table 34: Arkansas Research and Technology Park Economic Impact in Arkansas

Arkansas Research and Technology Park Economic Impact in Arkansas				
Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	260	\$11,323,653	\$13,052,141	\$37,684,480
Indirect Effect	101	\$4,958,260	\$8,474,628	\$15,311,732
Induced Effect	85	\$3,363,762	\$6,213,542	\$11,106,414
Total Effect	447	\$19,645,675	\$27,740,311	\$64,102,627

Other institutions and Centers across the University of Arkansas also provide key economic development services to constituents across the state or region. Some of these centers are highlighted below.

Office of Entrepreneurship and Innovation

A key aspect of the economic development efforts of the University of Arkansas is its commitment to encouraging entrepreneurship among the faculty, students, and alumni of the institution. The Office of Entrepreneurship and Innovation serves as the central hub for coordinating the various entrepreneurial activities of University of Arkansas affiliates. The activities of this Office include but are not limited to training and coaching student teams to participate in prestigious business plan competitions, teaching classes to equip students with the tools and opportunities to develop and implement business ideas, providing a co-working space for students and alumni, and hosting a plethora of seminars and workshops that aid entrepreneurs in Northwest Arkansas.

As a result of these efforts, student teams have won more than 90 business plans competitions and raised more than \$3.0 million in prize money alone since 2002. Cumulatively, these businesses have gone on to raise more than \$60 million to build businesses. Partial information from the various entrepreneurship efforts of the University of Arkansas indicate that more than 142 businesses were formed with some affiliation to the University of Arkansas, in the past five years.

Table 35: Businesses with University of Arkansas Affiliations

Businesses with University of Arkansas Affiliations	
Formed in New Venture Class	22
Formed after New Venture Class	17
Current ARTP Tenant	15
Former ARTP Tenant	31
Faculty Owned Business	5
University Owned License	2
Businesses with Other University Affiliation	50

Impact of the Arkansas Small Business and Technology Development Center

The Arkansas Small Business and Technology Development Center (ASBTDC) is part of a network of university-based economic development centers that assist new and existing businesses with business creation, management and operation. This center provides service to businesses in the following counties: Benton, Boone, Carroll, Madison, Marion, Newton, Searcy, and Washington. In 2018, staff at the ASBTDC held 18 seminars and workshops and logged 1,500 case hours. This work assisted in the formation of 18 new business and provided services to 102 active business owners. These activities resulted in the creation of 106 new jobs and businesses raised over \$11 million in capital.

Impact of the World Trade Center Arkansas

The World Trade Center Arkansas’s (WTCA) mission is to grow international trade and increase Arkansas exports; by connecting Arkansas businesses to the world through international trade services, including trade missions, research, trade shows, consultation and training programs. The Center is part of the University of Arkansas and serves as the designated international trade promotion arm for the Arkansas Economic Development Commission (AEDC), strengthening the industrial base, enhancing business expansion and job retention as companies grow and benefit from the Center’s services. The World Trade Center’s international trade services generated more than \$40 million in new and expanded revenue for Arkansas businesses since late 2011, but much more potential for international trade remains untapped.

The Center provides non-quantifiable services for companies such as consultation, strategic relationship building, training courses, guidance, day-to-day support and more that has translated into building the knowledge and capacity of company decision-makers throughout the state. In addition, by engaging in commercial diplomacy, the Center cultivates key relationships with diplomats and foreign government officials, achieving strategic objectives which meet the needs of Arkansas businesses and brings statewide exposure to foreign country diplomats. Throughout the eleven years of operation in Arkansas, the World Trade Center Arkansas has made significant inroads toward increasing exports from Arkansas and thus improving the state's economic prosperity through job expansion and retention for exporting companies and agricultural producers. Exports of Arkansas goods were valued at \$31.8 billion in 2017 while imports of goods into Arkansas were valued at \$40.2 billion in 2017. Jobs created through trade,

both in exporting and importing industries in Arkansas, account for 26.0 percent of Arkansas jobs. Trade related jobs grow six times faster than non-trade related jobs and also pay up to 18.0% more than non-trade related jobs. The WTCA provided official training programs to an estimated 50 Arkansas small business concerns in 2018. These companies are composed of new to export and other small businesses concerns that are currently exporting and want to expand their global access. Through training, these companies can access global markets and export opportunities that were unattainable prior to training. The Center has created relationships with international governments that have helped increase Arkansas exports. Active engagement by the WTCA with the governments of Canada and Mexico, contributed to a 14.0 percent increase of Arkansas exports to these countries from 2016 to 2017.

Impact of University of Arkansas Service Learning Programs and Capstone Projects

At the University of Arkansas, students have the opportunity through classes to build critical thinking skills while engaging in experiential, community-based activities that provide assistance to people and communities in need. The service learning programs and capstone projects take many forms including the Legal Aid Clinic at the School of Law, marketing and other assistance to area non-profits, to large scale community development initiatives in Belize and Vietnam. In the academic year 2017-2018, over 1,800 students participated in more than 122 courses and benefited more than 143 community partners in the region, Arkansas and around the world. The students and more than 84 faculty involved in these programs provided over 116,000 hours of service with was valued at \$2.3 million¹⁶.

Table 36: Economic Value of University of Arkansas Service Learning Programs and Capstone Projects

Economic Value of University of Arkansas Service Learning Programs and Capstone Projects						
Semester	Courses	Faculty	Students	Community Partners	Hours of Service	Economic Value of Service
Summer 2017	NA	NA	158	NA	2,370	\$47,424
Fall 2017	58	41	849	63	52,422	\$1,048,964
Spring 2018	64	43	872	80	61,267	\$1,225,953
Total	122	84	1,879	143	116,059	\$2,322,341

Source: University of Arkansas Vice Chancellor for Economic Development

University of Arkansas Global Campus

The Global Campus works across the Fayetteville campus, industry and business leaders, and other institutions to provide access to educational opportunity to help people advance their careers or transition to new ones. Specialized units located in Fayetteville, AR and Rogers, AR deliver various online and distance education. The programs provide education and training to employees and individuals at firms of various sizes, including multinational and/or Fortune 500 companies such as Tyson Foods, Inc., Mondelez International, JB Hunt and Ernst & Young. As of the academic year 2017-2018, there were 3,150 students exclusively online in 656 courses across 48 online degree, certification and licensure programs/plans.

Impact of University of Arkansas Career Services

For maximum community impact, a strong connection between regional employers and the University of Arkansas is essential. The responsibility for career placement services is met by three different centers: the University of Arkansas Career Development Center, the Sam M. Walton College of Business Career Development Center, and the School of Law’s Office of Career Services. In addition to maintaining constant contact with the community of employers, these organizations hold career fairs, host resume writing workshops, and prepare students for interviews. The career fairs are key avenues for employers to meet with students from the University of Arkansas that may become future employees and interns. In the 2017-2018 academic year, the career centers at the University hosted nearly 20 events where more than 1,000 employers attended (the employer counts are not unique).

The efforts of the staff at these career centers, from across the state and country, contributed to an 82.8 percent placement rate for graduates in the Class of 2018. This preliminary estimate of the placement rate means that graduates are employed, attending graduate school or otherwise engaged in meaningful activities post-graduation. The table below shows preliminary salary data for graduates from the different colleges. Graduates from the College of Engineering commanded the highest wages post-graduation, followed by graduates from the Sam M. Walton College of Business. Undergraduates from across the University received an average salary of \$48,666 in 2018.

Table 37: University of Arkansas Class of 2018 Average Reported Salaries

University of Arkansas Class of 2018 Average Reported Salaries					
College	Bachelors	Masters	Doctorate	Advanced Certificate	Total
College of Education and Health Professions	\$47,512	\$43,103	\$73,635	\$65,598	\$49,536
College of Engineering	\$61,058	\$73,948	\$81,885	N/A	\$65,735
Dale Bumpers College of Agricultural, Food, and Life Sciences	\$40,333	\$50,705	\$62,500	N/A	\$43,005
Fay Jones School of Architecture and Design	\$43,996	N/A	N/A	N/A	\$43,996
J. William Fulbright College of Arts and Sciences	\$38,795	\$42,086	\$51,064	N/A	\$40,000
Sam M. Walton College of Business	\$49,434	\$61,882	\$112,000	N/A	\$51,881
School of Law	N/A	N/A	\$61,005	N/A	\$63,672
Grand Total	\$48,666	\$57,944	\$69,962	\$65,598	\$51,997

Source: University of Arkansas Career Development Center

The university by virtue of its mission also provides important networking opportunities to academics and industry professionals through conferences. Several research and outreach units at the University of Arkansas, listed below, contribute to the generation of innovative ideas and knowledge that improve the decision-making process in the both the public and private sectors in the State of Arkansas, in the nation and internationally.

Table 38: University of Arkansas Units Transferring Specific Expertise and Knowledge

University of Arkansas Units Transferring Specific Expertise and Knowledge	
Arkansas High Performance Computing Center	http://hpc.uark.edu/
Arkansas Membrane Research Center	http://www.mastcenter.org/
Arkansas Security Research and Education (ASCENT) Institute	https://ascent.uark.edu/
Center for Business and Economic Research	http://cber.uark.edu/
Center for Excellence in Logistics and Distribution (CELDi)	http://celdi.org/
Center for Executive Education	https://catalog.uark.edu/generalinfo/universitycenterresearchunits/centerforexecutiveeducation/
Center for Grid-Connected Advanced Power Electronic Systems (GRAPES)	http://grapes.uark.edu/
Center for Information Security and Reliability	http://isr.csce.uark.edu/
Center for Innovation in Healthcare Logistics	-
Center for Power Optimization of Electro-Thermal Systems (POETS)	https://poets-erc.org/
Center for Protein Structure and Function	http://protein.uark.edu/
Center for Retailing Excellence	http://cre.uark.edu/
Center for Secure Evolvable Energy Delivery System (SEEDS)	https://seedscenter.uark.edu/
Center for Statistical Research and Consulting	https://catalog.uark.edu/generalinfo/universitycenterresearchunits/centerforstatisticalresearchandconsulting/
Center of Excellence for Poultry Science	http://www.poultryscience.uark.edu/
Chemical Hazards Research Center	http://chemical-hazards-research.uark.edu/
Community Design Center	http://uacdc.uark.edu/
Exercise Science Research Center	http://exercisescience.uark.edu/index.php
Genesis Technology Incubator	https://artp.uark.edu/genesis-technology-incubator/
High Density Electronics Center	http://www.hidec.uark.edu/
Information Technology Research Institute	http://itri.uark.edu/
Institute for Advanced Data Analytics	https://analytics.uark.edu/
Institute for Nanoscience and Engineering	http://nano.uark.edu/
Institute of Food Science and Engineering	http://www.uark.edu/depts/ifse/
Mack-Blackwell Transportation Center	http://mackblackwell.uark.edu/
McMillon Innovation Studio	https://mcmillonstudio.uark.edu/
National Center for Reliable Electric Power Transmission (NCREPT)	http://ncrept.uark.edu/
Office for Studies on Aging	https://catalog.uark.edu/generalinfo/universitycenterresearchunits/officeforstudiesonaging/
Resiliency Center	https://catalog.uark.edu/generalinfo/universitycenterresearchunits/resiliencycenter/
Small Business and Technology Development Center	http://sbtcdc.uark.edu/
Southwest Radiation Calibration Center	-

Supply Chain Management Research Center	http://scmr.uark.edu/
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Other Outreach Impacts at the University of Arkansas

In addition to the effects that have been valued in previous sections, there are a great number of activities at the University of Arkansas that have significant impacts on the state but are difficult to quantify. This section identifies a few of those impacts and provides information on the units that provide such important work.

The University of Arkansas, through the Office for Sustainability (OFS) places itself at the forefront of educational institutions that lead the charge to reduce environmental impact and neutralize carbon footprint. These goals are accomplished by using the campus as a living laboratory for innovation by overseeing the implementation of the University of Arkansas sustainability goals. The OFS convenes the community to share best practices, evaluates and recommends new programs and policies that can serve as replicable models. The office also coordinates research initiatives to expand the knowledge of sustainability solutions¹⁷.

When people cannot afford to invest in education themselves, they can turn to the help of various scholarships and assistantships available at the University. To help students fund their education, the Academic Scholarship Office at the University of Arkansas administers university-wide merit-based scholarships. The organization serves as a clearinghouse for scholarships awarded by academic departments and outside agencies and supports the university's mission of recruiting and retaining high achieving students who help to enrich and diversify the academic environment of the University of Arkansas. While the University does not currently offer scholarships solely on the basis of need, several recipients of merit-based scholarships have significant financial needs to attend the University.

The University of Arkansas also administers several programs that are targeted towards children from underprivileged and underrepresented backgrounds. These programs, listed in the following table, provide students with academic assistance, equip students to attend and succeed in college, and allow students to experience campus life.

Table 39: University of Arkansas Units Providing Support to Underrepresented Groups

University of Arkansas Units Providing Support to Underrepresented Groups	
Center for Children and Youth	http://cied.uark.edu/center-for-children-and-youth.php
Center for Multicultural and Diversity Education	https://multicultural.uark.edu/
Center for Learning and Student Success (CLASS+)	http://class.uark.edu/
College Access Initiative	https://multicultural.uark.edu/college-access/
La Oficina Latina	https://multicultural.uark.edu/diversity-and-inclusion/programs/la-oficina-latina.php
Office of Equal Opportunity and Compliance	http://oeoc.uark.edu/

Student Support Services	https://sss.uark.edu/
Talent Search	https://talentsearch.uark.edu/
Upward Bound	http://ub.uark.edu/
Veterans Upward Bound	http://vub.uark.edu/

The effect of the University of Arkansas on children’s education is not only indirect through providing their parents with higher education. University personnel also impact children directly by training Arkansas school teachers and making presentations to children at local schools. The scope of these programs is vast and interspersed through some of the various academic and outreach units at the University of Arkansas listed below.

Table 40: University of Arkansas Units Providing Education Outreach to Arkansas School Children

University of Arkansas Units Providing Education Outreach to Arkansas School Children	
Arkansas Center for Space & Planetary Sciences	http://spacecenter.uark.edu/
Bessie Boehm Moore Center for Economic Education	http://bmcee.uark.edu/
Center for Advanced Spatial Technologies (CAST)	http://cast.uark.edu/
Center for Mathematics and Science Education (CMASE)	http://cmase.uark.edu/
Garrison Financial Institute	http://gfi.uark.edu/
Information Technology Research Institute	http://itri.uark.edu/

At the University of Arkansas lifelong learning opportunities are provided through the Sam M. Walton College Executive Education, and the Osher Lifelong Learning Institute.

The University of Arkansas also fosters and amplifies the contributions of its alumni to civic participation and community involvement in the State of Arkansas, nationally and internationally through the work of several different outreach centers and research units. These centers and research units disseminate information on a wide variety of subjects and greatly enhance the human capital of consumers of the information and are listed below.

Table 41: University of Arkansas Units Engaged in Civic Participation and Community Involvement

University of Arkansas Units Engaged in Civic Participation and Community Involvement	
Arkansas Center for Space & Planetary Sciences	http://spacecenter.uark.edu/
Arkansas Security Research and Education (ASCENT) Institute	https://ascent.uark.edu/
Arkansas Water Resources Center	http://www.uark.edu/depts/awrc/
Center for Advanced Spatial Technologies (CAST)	http://cast.uark.edu/
Center for Business and Economic Research	http://cber.uark.edu/
Center for Communication and Media Research	http://fulbright.uark.edu/departments/communication/center-for-communication-and-media-research/index.php
Center for Ethics in Journalism	https://journalismethics.uark.edu/
Center for Interdisciplinary Study of Science and the Arts	https://catalog.uark.edu/generalinfo/universitycentersandresearchunits/center-for-interdisciplinary-study-science-arts/
Center for Power Optimization of Electro-Thermal Systems (POETS)	https://poets-erc.org/
Center for Social Research	https://www.ua-csr.org/
Center for Utilization of Rehabilitation Resources for Education, Networking, Training, and Service (CURRENTS)	https://catalog.uark.edu/generalinfo/universitycentersandresearchunits/currents/
Community and Family Institute	http://fulbright.uark.edu/departments/sociology/community-and-family-institute/
David and Barbara Pryor Center for Arkansas Oral and Visual History	http://pryorcenter.uark.edu/
Diane D. Blair Center of Southern Politics and Society	http://blaircenter.uark.edu/
Garvan Woodland Gardens	http://garvangardens.com/
International Center for the Study of Early Asian and Middle Eastern Musics	http://www.uark.edu/ua/eeam/
King Fahd Center for Middle East and Islamic Studies	http://mest.uark.edu/
National Agricultural Law Center	http://www.nationalaglawcenter.org/
Office for Education Policy	http://www.officeforeducationpolicy.org/
Resiliency Center	https://catalog.uark.edu/generalinfo/universitycentersandresearchunits/resiliencycenter/
Terrorism Research Center	http://trc.uark.edu/

Tesseract Center for Immersive Environments and Game Design	http://tesseract.uark.edu/
Tyson Center for Faith and Spirituality in the Workplace	http://tfsu.uark.edu/

Impact of University of Arkansas Volunteers

The University of Arkansas and its various constituents have a proud history of community service in the local area and the state of Arkansas. Students, faculty, and staff from the flagship University participate in various programs that make demands of time and finances. A variety of student organizations and some faculty and staff organizations routinely fundraise for various causes. The Center for Community Engagement serves as the campus coordinator for various charitable and volunteer activities. The Volunteer Action Center, based within the Center for Community Engagement, acts as clearinghouse and planning hub for volunteer programs that affect non-profit agencies in Washington and Benton Counties. In the 2017-2018 academic year, 6,666 students volunteered for a total of 146,501 hours with over 350 different community organizations¹⁸. According to independentsector.org, the value of one volunteer hour in Arkansas was \$20.01 in 2017, therefore researchers estimate the total value of University of Arkansas volunteerism at \$2,911,483¹⁹.

University of Arkansas Alumni Impacts

The University of Arkansas positively impacts the state of Arkansas by serving as the premier source of higher education. The university provides an environment that encourages creativity and facilitates opportunities to cultivate imaginative and innovative ideas, and thereafter, positively affects the students' future environments. Human capital development at the University takes many forms but is primarily accomplished through the University's commitment to teaching. Learning at the University of Arkansas occurs through a broad range of academic programs that lead to the awards of baccalaureate, master's, doctoral, and professional degrees. These degrees are offered in traditional disciplines within arts, humanities, social sciences, and natural sciences, and also in the core professional areas of agricultural, food, and life sciences; architecture; business; education; engineering; nursing; human environmental sciences; and law.

The table below shows the number of different degrees that are offered through each of the colleges at the University of Arkansas. In total, 239 baccalaureate, master's, doctorate, and certificate programs are administered through the 10 colleges at the University of Arkansas (the Honors College offers no degrees). The J. William Fulbright College of Arts and Sciences offers more than a third of the degrees at the University of Arkansas. The Global Campus (formerly known as the School of Continuing Education) offers degree programs from various colleges to constituents through distance learning programs.

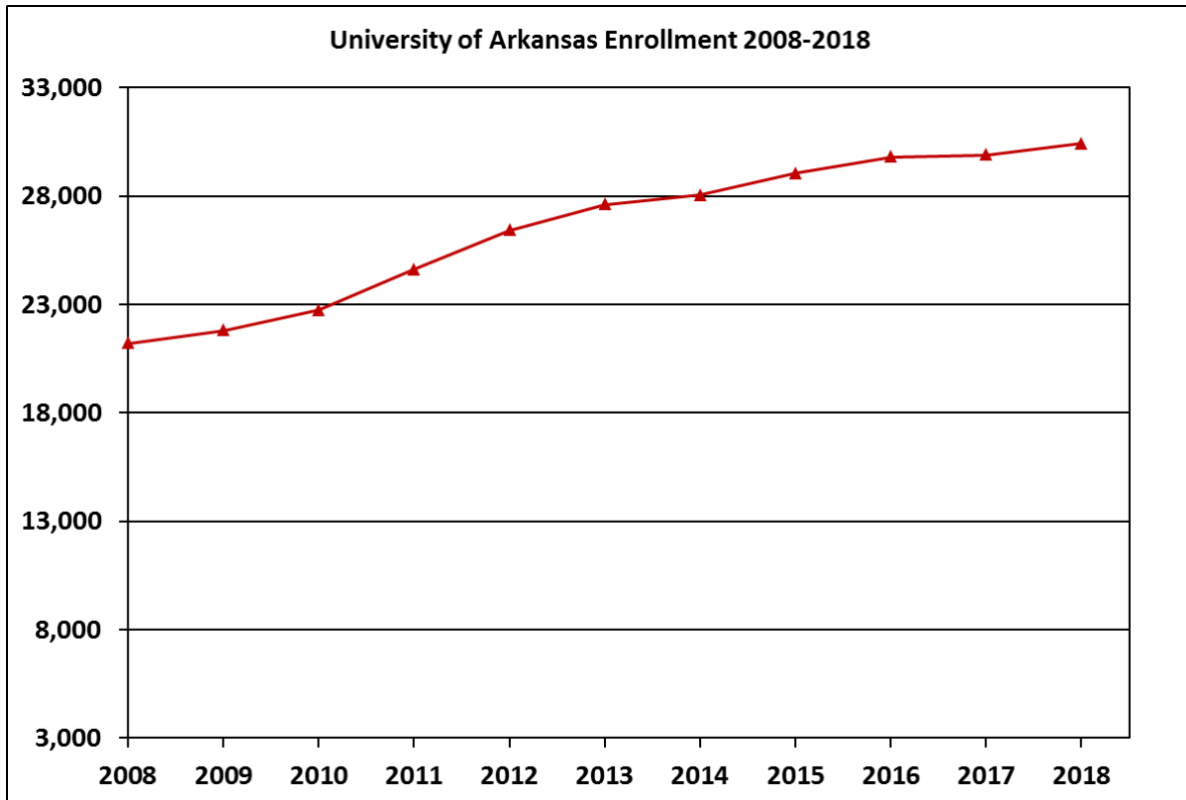
Table 42: University of Arkansas: Academic Departments and Degrees Offered

University of Arkansas: Academic Departments and Degrees Offered					
College/School	Departments/ Schools	Baccalaureate Degrees	Master's Degrees/LLM	Doctorate/ JD	Certificates/ Specialty Degrees
Dale Bumpers College of Agriculture, Food and Life Sciences	11	15	11	6	1
Fay Jones School of Architecture	4	5	1	N/A	N/A
J. William Fulbright College of Arts and Sciences	22	38	25	11	6
Sam M. Walton College of Business	10	10	4	2	3
College of Education and Health Professions	7	16	19	11	12
College of Engineering	9	10	13	1	2
Graduate School and International Education	1	N/A	5	5	3
School of Law	1	N/A	1	1	2

Since its founding in 1871, the University of Arkansas has awarded a total of 202,273 degrees. Of these, 136,546 are bachelor's degrees, 49,129 are master's degrees, and 6,743 are doctorates. Enrollment counts during the same period total up to more than 1,025,495 (the figure does not represent unique

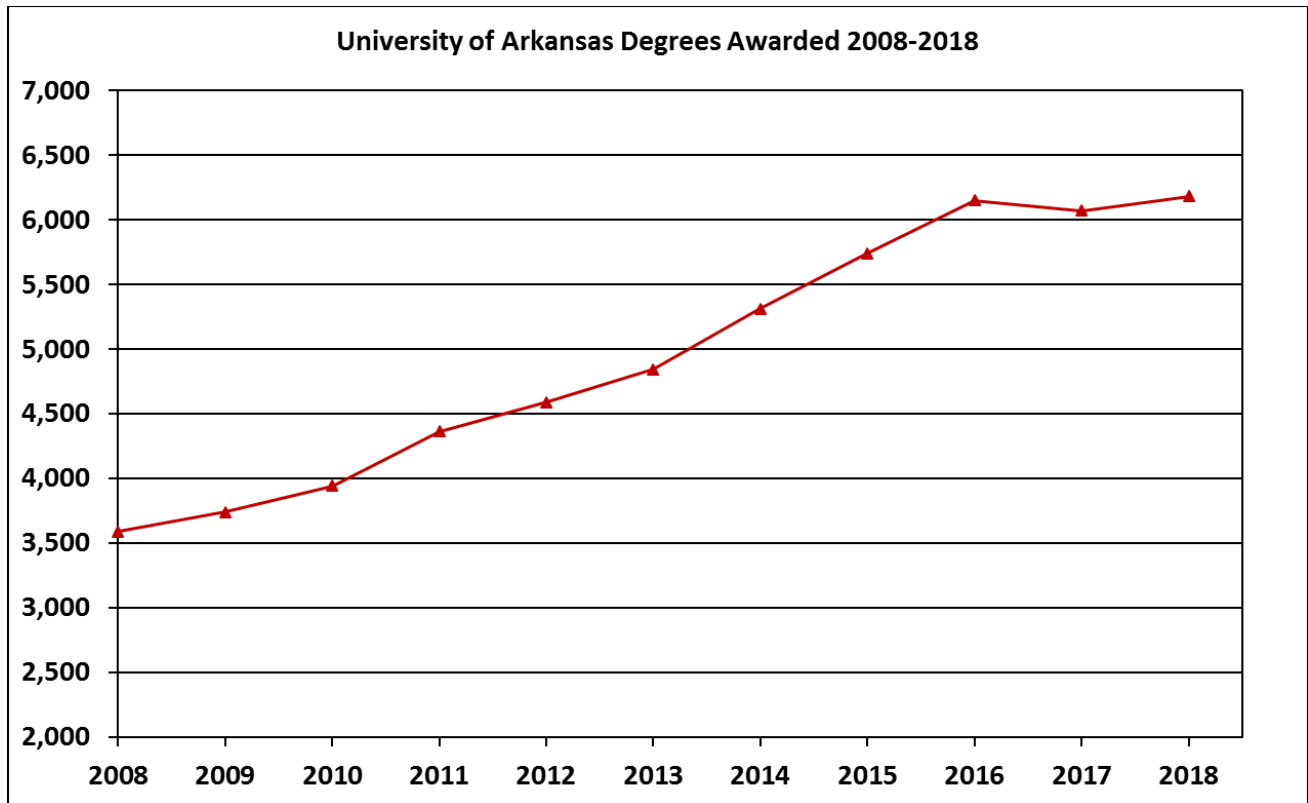
students)²⁰. Figure 4 depicts the enrollment trends in the last ten years (2008-2018). During this period, annual enrollment has gone up a remarkable 43.4 percent with an average annual increase in enrollment of 3.7 percent. In the same time period, there was an increase of 72.4 percent in the number of degrees awarded with an average annual increase of 5.7 percent in degrees awarded (Figure 5)²¹.

Figure 4: University of Arkansas Enrollment 2008-2018



Source: University of Arkansas Office of Institutional Research

Figure 5: University of Arkansas Degrees Awarded 2008-2018



Source: University of Arkansas Office of Institutional Research

As graduates of the University of Arkansas, former students are connected to the broad alumni network across the state and the country. This important connection leads to future opportunities for the students.

The table below uses data provided by the Arkansas Alumni Association to show living University of Arkansas alumni who resided in the state in 2018. These University of Arkansas alumni have had a tremendous impact on the state and its 75 counties. As of 2018, there were a total of 77,183 alumni living in Arkansas. As the total population of Arkansas was most recently estimated at 3,004,279 by the U.S. Census Bureau, this implies that 2.6 percent of the state’s residents are University of Arkansas alumni²². Of those alumni, 23,200 have graduate (Master’s or PhD) or professional degrees, 53,275 have bachelor’s degrees, and 708 have associate’s degrees. Washington County, home to the University of Arkansas, has the greatest number of resident graduates, with 7,408 alumni who have graduate or professional degrees, 16,484 alumni who have bachelor’s degrees, and 302 alumni who have associate’s degrees. Pulaski County, the state’s most populous county, has the second greatest number of resident University of Arkansas alumni, with 3,537 alumni who have graduate or professional degrees, 9,325 alumni who have bachelor’s degrees, and 53 alumni who have associate’s degrees. Benton County, just north of the home of the University of Arkansas, has the third greatest number of alumni, with 3,430 alumni who have graduate or professional degrees, 9,182 alumni with bachelor’s degrees, and 172 alumni with associate’s degrees²³.

Table 43: University of Arkansas Alumni Currently Living in Arkansas

University of Arkansas Alumni Currently Living in Arkansas			
Counties	Associate's Degree	Bachelor's Degree	Graduate or Professional Degree
Arkansas	2	290	106
Ashley	-	91	87
Baxter	5	434	144
Benton	172	9,182	3,430
Boone	4	592	257
Bradley	1	40	37
Calhoun	-	14	25
Carroll	6	399	137
Chicot	1	69	38
Clark	-	127	108
Clay	-	57	24
Cleburne	2	165	80
Cleveland	1	19	29
Columbia	-	108	76
Conway	2	150	82
Craighead	6	655	309
Crawford	5	830	477
Crittenden	-	349	79
Cross	-	121	28
Dallas	-	30	21
Desha	2	95	54
Drew	-	81	106
Faulkner	14	1,245	521
Franklin	-	247	145
Fulton	4	50	22
Garland	13	1,330	507
Grant	1	92	48
Greene	1	129	66
Hempstead	2	114	50
Hot Spring	-	103	61
Howard	1	113	42
Independence	4	303	119
Izard	-	67	22
Jackson	1	87	30
Jefferson	8	461	468
Johnson	4	127	128
Lafayette	-	15	19

Lawrence	-	55	13
Lee	-	71	19
Lincoln	-	37	27
Little River	-	104	35
Logan	4	172	108
Lonoke	7	647	308
Madison	19	430	170
Marion	-	113	52
Miller	1	304	97
Mississippi	-	228	119
Monroe	2	47	18
Montgomery	-	74	28
Nevada	-	25	26
Newton	3	67	39
Ouachita	1	143	115
Perry	-	49	29
Phillips	1	210	112
Pike	1	64	18
Poinsett	-	75	34
Polk	1	147	72
Pope	2	503	352
Prairie	2	64	22
Pulaski	53	9,325	3,537
Randolph	1	80	27
St. Francis	-	168	52
Saline	14	1,238	438
Scott	1	72	36
Searcy	2	64	32
Sebastian	21	2,645	1,325
Sevier	3	106	31
Sharp	-	51	22
Stone	1	77	25
Union	1	297	129
Van Buren	2	80	45
Washington	302	16,484	7,408
White	1	436	221
Woodruff	-	44	14
Yell	-	98	63
Total	708	53,275	23,200

Increased Earnings of University of Arkansas Alumni

Many individuals choose to pursue a college education in hopes of earning a higher income in the future. Indeed, college experience and the degrees obtained allow individuals to gain skills that will make them more productive and valuable to future employers²⁴. The difference between annual earnings associated with varying levels of education in the state of Arkansas is described in the table that follows. The data were drawn from the 2017 American Community Survey from the U. S. Census Bureau. Earnings are reported in nominal 2017 dollars for more accurate comparative purposes.

The table shows how important increasing levels of education are to an individual's median earnings. Arkansas median annual wages increase from \$21,435 for individuals with below high school education to \$25,962 for individuals with a high school diploma. Median earnings continue growing to \$28,664 when a person receives an associate's degree, climb to \$41,616 for a bachelor's degree, and then reach a peak with \$50,933 for a graduate or professional degree. Thus, for the median person who made the decision and obtained higher education, earnings almost double.

Table 44: Arkansas Median Earning by Educational Attainment

Arkansas Median Earning by Educational Attainment					
Counties	Below HS	High School	Associate's Degree	Bachelor's Degree	Graduate or Professional Degree
Arkansas	\$24,070	\$27,929	\$27,365	\$45,250	\$50,821
Ashley	\$24,648	\$30,726	\$29,273	\$37,027	\$51,889
Baxter	\$19,450	\$24,404	\$26,434	\$36,628	\$47,118
Benton	\$24,943	\$30,429	\$36,700	\$59,807	\$69,442
Boone	\$25,021	\$23,953	\$28,641	\$41,529	\$45,191
Bradley	\$27,375	\$27,443	\$35,349	\$45,076	\$54,625
Calhoun	\$23,036	\$25,962	\$25,736	\$47,917	\$79,205
Carroll	\$23,085	\$24,107	\$22,664	\$32,094	\$50,819
Chicot	\$20,833	\$29,038	\$27,137	\$31,895	\$46,490
Clark	\$20,357	\$25,244	\$30,344	\$40,030	\$46,889
Clay	\$16,675	\$24,407	\$25,773	\$36,774	\$50,587
Cleburne	\$26,824	\$29,638	\$26,423	\$42,729	\$58,603
Cleveland	\$22,393	\$33,913	\$35,694	\$54,318	\$54,583
Columbia	\$16,136	\$28,909	\$28,664	\$47,500	\$50,341
Conway	\$19,388	\$25,646	\$30,264	\$46,616	\$54,219
Craighead	\$21,894	\$25,585	\$28,121	\$42,524	\$61,604
Crawford	\$23,875	\$28,217	\$32,078	\$43,500	\$60,079
Crittenden	\$19,370	\$26,873	\$33,890	\$50,696	\$53,364
Cross	\$18,010	\$29,450	\$29,049	\$50,592	\$54,844

Dallas	\$26,458	\$24,066	\$23,806	\$38,140	\$49,728
Desha	\$21,719	\$24,926	\$22,905	\$41,339	\$65,573
Drew	\$19,141	\$24,020	\$31,527	\$44,595	\$52,716
Faulkner	\$24,646	\$28,750	\$32,720	\$46,287	\$58,377
Franklin	\$18,333	\$26,534	\$32,348	\$39,326	\$58,661
Fulton	\$22,917	\$27,354	\$23,482	\$37,917	\$49,453
Garland	\$18,853	\$24,766	\$29,123	\$41,616	\$56,069
Grant	\$15,357	\$35,692	\$35,478	\$44,726	\$57,574
Greene	\$17,279	\$29,194	\$27,643	\$45,559	\$49,328
Hempstead	\$19,921	\$26,646	\$25,263	\$45,379	\$44,890
Hot Spring	\$21,342	\$25,004	\$29,398	\$35,342	\$51,326
Howard	\$21,435	\$25,094	\$26,750	\$37,604	\$43,289
Independence	\$18,113	\$27,126	\$28,900	\$41,156	\$59,011
Izard	\$18,409	\$22,108	\$27,882	\$41,611	\$34,449
Jackson	\$22,976	\$23,482	\$26,397	\$53,065	\$53,785
Jefferson	\$20,114	\$27,129	\$30,901	\$46,719	\$52,086
Johnson	\$19,383	\$25,555	\$30,817	\$37,211	\$51,045
Lafayette	\$15,833	\$25,000	\$28,681	\$36,094	-
Lawrence	\$19,427	\$26,745	\$26,101	\$35,925	\$42,320
Lee	\$22,225	\$20,107	\$27,314	\$60,071	\$36,821
Lincoln	\$24,615	\$22,305	\$35,799	\$42,619	\$42,952
Little River	\$17,136	\$24,224	\$29,844	\$42,230	\$47,721
Logan	\$17,179	\$25,142	\$30,206	\$35,949	\$43,929
Lonoke	\$24,784	\$31,510	\$39,461	\$50,567	\$58,919
Madison	\$21,064	\$30,625	\$31,628	\$39,394	\$49,375
Marion	\$21,071	\$19,604	\$23,345	\$42,957	\$49,135
Miller	\$24,289	\$26,729	\$31,774	\$42,263	\$53,331
Mississippi	\$23,710	\$26,451	\$25,542	\$41,361	\$52,222
Monroe	\$20,000	\$26,364	\$29,970	\$45,350	\$54,952
Montgomery	\$18,227	\$25,057	\$30,417	\$41,563	\$49,628
Nevada	\$26,667	\$25,424	\$24,894	\$38,073	\$43,250
Newton	\$11,193	\$24,182	\$23,272	\$36,793	\$16,051
Ouachita	\$18,146	\$23,529	\$29,665	\$40,649	\$48,651
Perry	\$23,200	\$26,613	\$28,813	\$48,000	\$55,083
Phillips	\$18,841	\$21,571	\$25,425	\$44,076	\$49,602
Pike	\$21,458	\$23,307	\$26,211	\$33,125	\$49,095
Poinsett	\$19,015	\$26,902	\$29,786	\$38,833	\$41,250
Polk	\$21,777	\$21,818	\$22,271	\$38,456	\$46,705

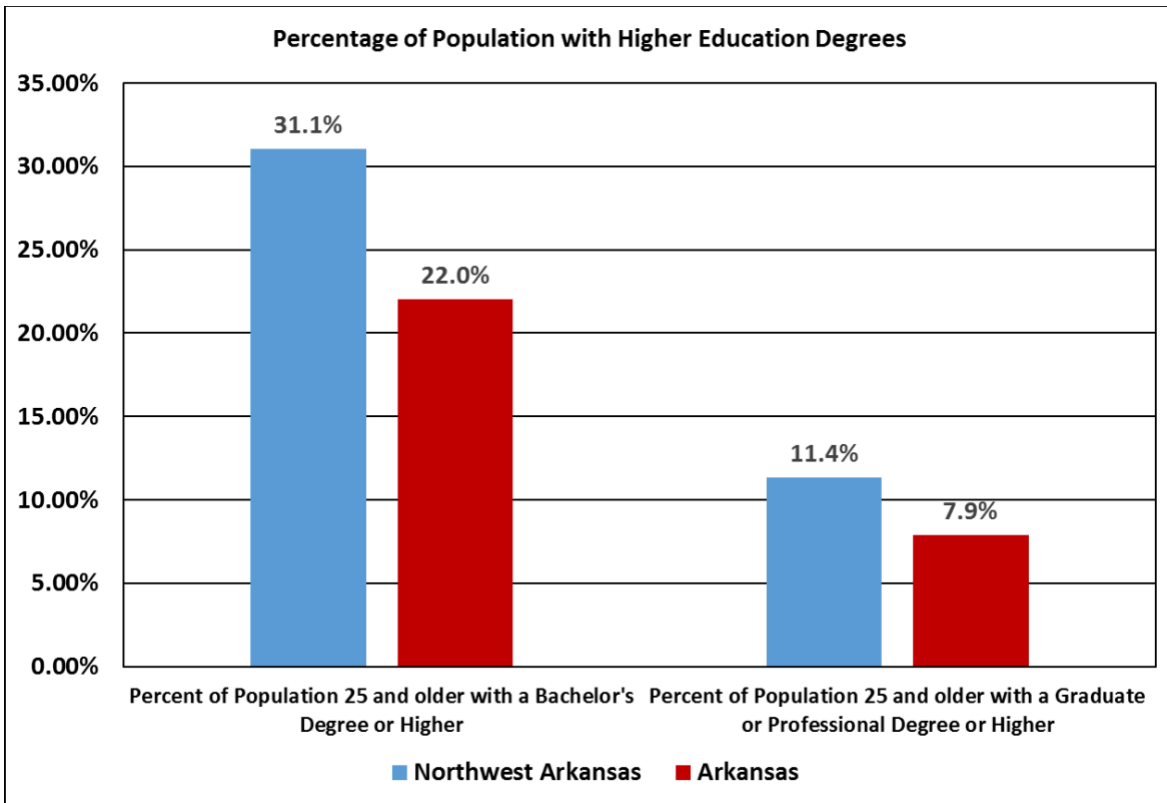
Pope	\$25,186	\$24,566	\$24,648	\$40,041	\$51,369
Prairie	\$25,192	\$29,408	\$32,262	\$41,964	\$44,808
Pulaski	\$20,995	\$27,772	\$31,737	\$46,706	\$64,391
Randolph	\$23,750	\$27,474	\$24,365	\$35,534	\$53,542
St. Francis	\$19,031	\$22,522	\$27,032	\$35,469	\$42,750
Saline	\$24,306	\$30,481	\$37,168	\$51,155	\$59,709
Scott	\$22,397	\$22,886	\$21,516	\$42,396	\$41,208
Searcy	\$21,190	\$26,082	\$25,084	\$27,614	\$42,281
Sebastian	\$21,136	\$25,489	\$30,848	\$47,966	\$57,521
Sevier	\$24,038	\$27,627	\$27,137	\$41,193	\$40,125
Sharp	\$22,868	\$24,382	\$25,572	\$30,068	\$40,686
Stone	\$17,266	\$21,500	\$19,920	\$37,357	\$59,764
Union	\$22,053	\$26,727	\$30,526	\$44,299	\$61,563
Van Buren	\$20,500	\$25,500	\$22,352	\$31,250	\$52,361
Washington	\$24,050	\$27,471	\$31,953	\$47,006	\$60,340
White	\$25,469	\$27,996	\$31,815	\$43,656	\$51,844
Woodruff	\$23,875	\$24,015	\$24,444	\$52,188	\$47,361
Yell	\$24,573	\$29,148	\$28,148	\$36,913	\$47,500
Arkansas	\$21,435	\$25,962	\$28,664	\$41,616	\$50,933

Source: U.S. Census Bureau, 2017 American Community Survey

The wage differential in Pulaski County, the state’s most populous county, is significant as the education level grows, with the median wage increasing by \$18,934 from a high school diploma to a bachelor’s degree, and by \$17,685 from a bachelor’s degree to graduate or professional degree. In Washington County, home to the University of Arkansas, median earnings increase by \$19,536 if a person with a high school diploma completes a bachelor’s degree and increase by an additional \$13,334 if a person completes a graduate or professional degree.

It should be noted that not all the students at the University of Arkansas become part of the state’s long term economy. In Arkansas the percent of individuals holding a bachelor’s degree or higher has been increasing over time, and was 22.0 percent in 2017. Northwest Arkansas, where the University of Arkansas is located, has educational attainment metrics that are significantly higher than the rest of the state. Specifically, the percent of the population 25 or older with a bachelor’s degree or higher is greater in Northwest Arkansas at 31.1 percent, compared to 22.0 percent for entire state. Similarly, the percentage of the population 25 or older with a graduate or professional degrees is higher in Northwest Arkansas as well, with 11.4 percent in Northwest Arkansas and 7.9 percent in Arkansas in 2017. This is good evidence that many highly qualified workers like graduates of the University of Arkansas tend to concentrate in the Northwest Arkansas area²⁵.

Figure 6: Percentage of Population with Higher Education Degrees



Source: U.S. Census Bureau, 2017 American Community Survey

Tax and Transfer Effects of University of Arkansas Alumni

This section shows the economic effects of University of Arkansas graduates currently living and employed in Arkansas. The economic and population data for this section of the report are drawn from the 2017 American Community Survey²⁶. In order to approximate the number of employed alumni, the initial alumni data were multiplied the ratio of people between 25 and 64 years that are employed to the population of people 25 and older per county.

As shown in the following tables, University of Arkansas alumni earned estimated annual wages totaling \$2.7 billion, which is 7.5 percent of the total state wages of \$35.7 billion. Of these wages, \$1.2 billion is the increased earning for University of Arkansas alumni when compared to income that they would have earned with just a high school diploma. As mentioned earlier in this report, University of Arkansas alumni account for 2.6 percent of the state's population, so their relative economic impact is more than four times their proportional representation. University of Arkansas alumni accounted for \$938.7 million or 15.4 percent of all the income earned by those Arkansans with a graduate or professional degree. For Arkansans with a bachelor's degree, University of Arkansas alumni accounted for \$1.7 billion or 20.0 percent of the total wages earned by this group.

The impact of the University of Arkansas on alumni wages was even greater in select counties than on the state in general. Washington County, home to the University of Arkansas, showed the greatest level of wages earned by University of Arkansas alumni. Total wages earned in Washington County by

University of Arkansas alumni were \$867.9 million, or 28.1 percent of all income earned in Washington County.

Examining the wages earned by those with a graduate or professional degree in Washington County, one sees the impact of the University of Arkansas is even greater as alumni earned \$315.3 million, which was 42.3 percent of the total wages in this category. For bachelor’s degree wages in Washington County, University of Arkansas alumni earned \$546.6 million, or 64.8 percent of the total. Benton County had the second greatest dollar value of University of Arkansas alumni wages with a total of \$561.8 million earned. Out of that total, \$168.8 million was earned by alumni with a graduate or professional degree, and \$389.2 million was earned by alumni with a bachelor’s degree. 12.9 percent of the wages earned in Benton County and 9.6 percent of the wages in Madison County were earned by University of Arkansas alumni.

Table 45: University of Arkansas Alumni Wage Estimates

University of Arkansas Alumni Wage Estimates				
Counties	Associate's Degree	Baccalaureate Degree	Graduate or Professional Degrees	Total
Arkansas	\$31,576.12	\$8,738,575.01	\$3,587,344.70	\$12,357,495.83
Ashley	\$0.00	\$2,067,097.11	\$2,769,462.66	\$4,836,559.77
Baxter	\$57,430.72	\$7,822,633.15	\$3,338,868.92	\$11,218,932.78
Benton	\$3,780,227.18	\$389,229,202.35	\$168,823,325.25	\$561,832,754.78
Boone	\$65,408.09	\$14,389,605.82	\$6,797,681.18	\$21,252,695.10
Bradley	\$17,551.30	\$953,770.01	\$1,069,132.36	\$2,040,453.67
Calhoun	\$0.00	\$422,760.05	\$1,247,868.71	\$1,670,628.76
Carroll	\$61,642.73	\$6,219,913.94	\$3,381,694.05	\$9,663,250.72
Chicot	\$14,252.96	\$1,048,391.16	\$841,578.82	\$1,904,222.94
Clark	\$0.00	\$3,554,866.57	\$3,541,022.77	\$7,095,889.33
Clay	\$0.00	\$1,218,587.51	\$705,815.45	\$1,924,402.96
Cleburne	\$23,286.77	\$3,546,421.03	\$2,358,269.62	\$5,927,977.41
Cleveland	\$20,008.40	\$754,713.79	\$1,157,551.48	\$1,932,273.67
Columbia	\$0.00	\$3,327,263.32	\$2,481,448.34	\$5,808,711.66
Conway	\$33,204.86	\$5,141,560.12	\$3,269,143.69	\$8,443,908.68
Craighead	\$106,154.30	\$19,350,176.89	\$13,224,428.77	\$32,680,759.96
Crawford	\$91,524.82	\$25,466,919.64	\$20,213,901.40	\$45,772,345.86
Crittenden	\$0.00	\$12,168,494.79	\$2,899,433.86	\$15,067,928.65
Cross	\$0.00	\$4,048,983.78	\$1,015,701.22	\$5,064,685.00
Dallas	\$0.00	\$677,086.44	\$617,962.98	\$1,295,049.41
Desha	\$24,055.70	\$2,501,255.57	\$2,255,242.82	\$4,780,554.09
Drew	\$0.00	\$2,479,813.87	\$3,836,155.58	\$6,315,969.45
Faulkner	\$292,014.75	\$40,487,328.34	\$21,368,312.71	\$62,147,655.79

Franklin	\$0.00	\$6,914,950.75	\$6,055,218.61	\$12,970,169.36
Fulton	\$41,196.49	\$1,059,341.56	\$607,921.30	\$1,708,459.35
Garland	\$190,625.39	\$27,583,201.82	\$14,166,529.52	\$41,940,356.74
Grant	\$22,594.09	\$2,246,012.36	\$1,508,453.39	\$3,777,059.85
Greene	\$16,963.89	\$4,387,714.64	\$2,430,591.22	\$6,835,269.75
Hempstead	\$29,553.65	\$3,377,525.06	\$1,465,407.53	\$4,872,486.24
Hot Spring	\$0.00	\$2,257,117.58	\$1,941,301.95	\$4,198,419.54
Howard	\$14,853.62	\$3,008,980.20	\$1,287,459.83	\$4,311,293.65
Independence	\$64,556.86	\$7,917,324.07	\$4,458,436.34	\$12,440,317.27
Izard	\$0.00	\$1,505,955.26	\$409,381.69	\$1,915,336.95
Jackson	\$10,157.25	\$3,018,890.92	\$1,055,121.39	\$4,084,169.57
Jefferson	\$143,468.93	\$12,582,085.30	\$14,240,492.88	\$26,966,047.10
Johnson	\$61,651.57	\$3,138,265.64	\$4,338,881.78	\$7,538,798.99
Lafayette	\$0.00	\$301,257.01	\$0.00	\$301,257.01
Lawrence	\$0.00	\$1,317,250.00	\$366,773.33	\$1,684,023.33
Lee	\$0.00	\$2,489,782.14	\$408,401.49	\$2,898,183.63
Lincoln	\$0.00	\$791,353.78	\$581,986.42	\$1,373,340.20
Little River	\$0.00	\$2,432,007.82	\$924,885.83	\$3,356,893.65
Logan	\$61,515.68	\$3,939,070.04	\$3,022,410.96	\$7,022,996.68
Lonoke	\$169,854.19	\$23,633,267.16	\$13,108,662.39	\$36,911,783.74
Madison	\$312,108.13	\$10,854,124.79	\$5,378,390.17	\$16,544,623.08
Marion	\$0.00	\$1,806,980.63	\$951,120.22	\$2,758,100.85
Miller	\$17,853.15	\$8,404,278.79	\$3,383,903.79	\$11,806,035.73
Mississippi	\$0.00	\$6,052,618.89	\$3,988,576.38	\$10,041,195.27
Monroe	\$29,812.14	\$1,118,570.87	\$519,092.03	\$1,667,475.05
Montgomery	\$0.00	\$1,521,175.79	\$687,267.18	\$2,208,442.97
Nevada	\$0.00	\$552,764.97	\$653,044.63	\$1,205,809.60
Newton	\$31,121.62	\$1,393,924.46	\$353,969.58	\$1,779,015.66
Ouachita	\$16,543.21	\$3,646,543.52	\$3,509,822.14	\$7,172,908.88
Perry	\$0.00	\$1,567,158.80	\$1,064,366.68	\$2,631,525.48
Phillips	\$12,703.34	\$5,417,324.08	\$3,251,476.04	\$8,681,503.46
Pike	\$14,578.39	\$1,261,147.40	\$525,702.15	\$1,801,427.94
Poinsett	\$0.00	\$1,964,142.50	\$945,831.25	\$2,909,973.75
Polk	\$10,095.74	\$3,027,953.23	\$1,801,206.86	\$4,839,255.82
Pope	\$26,326.27	\$13,529,180.46	\$12,146,254.16	\$25,701,760.88
Prairie	\$41,229.26	\$1,544,840.78	\$567,028.79	\$2,153,098.84
Pulaski	\$972,553.82	\$292,490,601.23	\$152,950,404.31	\$446,413,559.36
Randolph	\$12,744.87	\$1,820,890.49	\$925,993.84	\$2,759,629.20
St. Francis	\$0.00	\$3,543,431.74	\$1,321,920.41	\$4,865,352.15

Saline	\$327,938.82	\$43,351,204.98	\$17,902,197.67	\$61,581,341.47
Scott	\$10,084.58	\$1,716,776.30	\$834,334.81	\$2,561,195.69
Searcy	\$27,025.88	\$845,529.85	\$647,313.82	\$1,519,869.55
Sebastian	\$366,407.24	\$79,812,635.17	\$47,946,264.47	\$128,125,306.88
Sevier	\$52,100.71	\$2,597,522.23	\$739,957.41	\$3,389,580.36
Sharp	\$0.00	\$688,932.18	\$402,132.73	\$1,091,064.91
Stone	\$6,911.17	\$1,838,215.69	\$954,802.21	\$2,799,929.08
Union	\$17,956.71	\$8,508,993.26	\$5,136,145.21	\$13,663,095.18
Van Buren	\$18,809.73	\$877,910.64	\$827,429.02	\$1,724,149.38
Washington	\$6,035,379.21	\$546,551,849.98	\$315,298,384.87	\$867,885,614.06
White	\$19,395.77	\$12,525,610.53	\$7,539,789.99	\$20,084,796.29
Woodruff	\$0.00	\$1,302,612.48	\$376,132.45	\$1,678,744.93
Yell	\$0.00	\$2,414,076.76	\$1,997,008.05	\$4,411,084.81
Total	\$13,825,010.09	\$1,734,066,296.83	\$938,706,928.52	\$2,686,598,235.45

Source: Center for Business and Economic Research Estimates

Table 46: University of Arkansas Alumni Income as a Percentage of Total Income in Arkansas Counties

University of Arkansas Alumni Income as a Percentage of Total Income in Arkansas Counties				
Counties	Associate's Degree	Baccalaureate Degree	Graduate or Professional Degrees	All Levels
Arkansas	0.1%	23.4%	19.2%	6.2%
Ashley	0.0%	6.8%	15.4%	2.4%
Baxter	0.0%	11.1%	7.6%	3.2%
Benton	0.4%	26.5%	20.0%	12.9%
Boone	0.0%	21.8%	17.3%	5.7%
Bradley	0.1%	5.4%	10.5%	1.8%
Calhoun	0.0%	4.6%	16.1%	3.1%
Carroll	0.1%	17.3%	9.3%	3.9%
Chicot	0.0%	9.5%	13.1%	2.1%
Clark	0.0%	5.9%	8.2%	3.1%
Clay	0.0%	7.9%	5.8%	1.4%
Cleburne	0.0%	9.2%	6.8%	2.3%
Cleveland	0.1%	3.0%	8.7%	1.7%
Columbia	0.0%	5.4%	6.4%	2.4%
Conway	0.1%	10.0%	10.3%	3.7%
Craighead	0.0%	5.8%	4.8%	2.5%

Crawford	0.0%	19.8%	25.6%	6.4%
Crittenden	0.0%	10.1%	4.3%	2.7%
Cross	0.0%	13.4%	4.1%	2.7%
Dallas	0.0%	5.3%	11.5%	2.0%
Desha	0.1%	13.2%	18.9%	4.7%
Drew	0.0%	5.8%	14.1%	3.4%
Faulkner	0.1%	9.1%	6.4%	3.8%
Franklin	0.0%	23.3%	46.6%	7.6%
Fulton	0.1%	7.3%	5.7%	1.9%
Garland	0.0%	14.6%	9.9%	4.2%
Grant	0.0%	5.8%	6.1%	1.6%
Greene	0.0%	4.0%	4.3%	1.4%
Hempstead	0.0%	9.3%	7.6%	2.5%
Hot Spring	0.0%	5.0%	5.1%	1.3%
Howard	0.0%	11.0%	12.2%	3.3%
Independence	0.1%	10.6%	7.2%	3.2%
Izard	0.0%	7.7%	5.1%	1.9%
Jackson	0.0%	11.5%	7.6%	3.1%
Jefferson	0.1%	9.0%	16.2%	3.8%
Johnson	0.1%	7.4%	13.0%	3.0%
Lafayette	0.0%	2.5%	-	0.6%
Lawrence	0.0%	4.6%	2.3%	1.2%
Lee	0.0%	18.0%	10.3%	4.5%
Lincoln	0.0%	6.4%	11.3%	1.7%
Little River	0.0%	15.7%	13.5%	3.2%
Logan	0.1%	13.0%	21.1%	3.6%
Lonoke	0.0%	9.6%	11.4%	3.5%
Madison	0.8%	54.2%	36.3%	9.7%
Marion	0.0%	8.9%	7.1%	2.5%
Miller	0.0%	9.5%	6.6%	2.5%
Mississippi	0.0%	10.2%	10.2%	2.5%
Monroe	0.2%	12.4%	17.1%	2.5%
Montgomery	0.0%	14.5%	8.8%	3.0%
Nevada	0.0%	3.7%	8.1%	1.6%
Newton	0.2%	11.5%	11.9%	3.0%
Ouachita	0.0%	9.2%	11.2%	3.2%
Perry	0.0%	7.1%	12.1%	2.6%
Phillips	0.0%	24.3%	20.4%	6.0%
Pike	0.0%	10.5%	3.4%	1.8%

Poinsett	0.0%	6.5%	7.8%	1.3%
Polk	0.0%	13.2%	10.9%	3.2%
Pope	0.0%	8.6%	11.5%	4.2%
Prairie	0.1%	10.6%	9.6%	2.3%
Pulaski	0.1%	16.9%	10.5%	7.7%
Randolph	0.0%	6.8%	4.7%	1.8%
St. Francis	0.0%	16.8%	6.8%	2.6%
Saline	0.1%	9.4%	6.0%	3.4%
Scott	0.1%	19.6%	10.0%	3.4%
Searcy	0.1%	14.9%	9.5%	2.3%
Sebastian	0.1%	24.0%	26.3%	8.9%
Sevier	0.1%	15.2%	7.1%	2.0%
Sharp	0.0%	6.7%	4.2%	0.9%
Stone	0.0%	11.0%	4.8%	3.1%
Union	0.0%	7.6%	8.3%	3.1%
Van Buren	0.1%	8.5%	7.0%	1.4%
Washington	0.9%	64.8%	42.3%	28.1%
White	0.0%	7.1%	5.0%	2.3%
Woodruff	0.0%	10.1%	12.3%	2.9%
Yell	0.0%	6.9%	11.0%	2.0%

Source: Center for Business and Economic Research Estimates

Another important impact of University of Arkansas alumni is the tax revenue they generate in the state and the individual counties. The 77,183 alumni create substantial tax revenues, and as the number of alumni grows, the tax revenue benefit will grow as well. It is also important to remember that taxpayers with higher education earn, on average, more than taxpayers with a lower education levels, thus the benefits of a more educated population continue over the person’s entire working life. The taxes paid by the University of Arkansas alumni benefit programs across the state, including creating more funding for education, which leads to an even greater number of Arkansans with higher education degrees.

The county level sales and use taxes in the table below were computed by taking the county sales and use tax rates for all counties²⁷, then multiplying those tax rates by the estimated proportion of employed alumni wages that would be subject to sales and use taxes (39 percent, according to the estimates from the U.S. Bureau of Labor Statistics Consumer Expenditure Survey)²⁸. The state sales tax dollars shown in the table below were calculated by multiplying the state sales and use tax rate of 6.5 percent by the appropriate proportion of employed alumni wages for each of the 75 counties in Arkansas.

The tables show that estimated state sales taxes paid by University of Arkansas alumni totaled \$68.1 million. The total of county sales taxes paid by alumni was \$12.3 million. Washington County had the most taxes paid by alumni: \$22.0 million to the state and \$4.2 million to the county. Benton County was second in terms of sales tax collections from alumni with \$14.2 million paid to the state and \$2.2 million paid to the county. Pulaski County had the third highest impact as University of Arkansas alumni contributed \$11.3 million to the state and \$1.7 million to the county.

Table 47: Estimated County Sales and Use Taxes Paid by University of Arkansas Alumni

Estimated County Sales and Use Taxes Paid by University of Arkansas Alumni					
County	Sales and Use Tax Rate	Associate's Degree	Baccalaureate Degree	Graduate or Professional Degrees	Total
Arkansas	1.000%	\$123.15	\$34,080.44	\$13,990.64	\$48,194.23
Ashley	1.500%	\$0.00	\$12,092.52	\$16,201.36	\$28,293.87
Baxter	1.000%	\$223.98	\$30,508.27	\$13,021.59	\$43,753.84
Benton	1.000%	\$14,742.89	\$1,517,993.89	\$658,410.97	\$2,191,147.74
Boone	1.250%	\$318.86	\$70,149.33	\$33,138.70	\$103,606.89
Bradley	2.000%	\$136.90	\$7,439.41	\$8,339.23	\$15,915.54
Calhoun	2.500%	\$0.00	\$4,121.91	\$12,166.72	\$16,288.63
Carroll	0.500%	\$120.20	\$12,128.83	\$6,594.30	\$18,843.34
Chicot	2.000%	\$111.17	\$8,177.45	\$6,564.31	\$14,852.94
Clark	1.500%	\$0.00	\$20,795.97	\$20,714.98	\$41,510.95
Clay	1.500%	\$0.00	\$7,128.74	\$4,129.02	\$11,257.76
Cleburne	1.625%	\$147.58	\$22,475.44	\$14,945.53	\$37,568.56
Cleveland	3.250%	\$253.61	\$9,566.00	\$14,671.96	\$24,491.57
Columbia	1.500%	\$0.00	\$19,464.49	\$14,516.47	\$33,980.96
Conway	1.750%	\$226.62	\$35,091.15	\$22,311.91	\$57,629.68
Craighead	1.000%	\$414.00	\$75,465.69	\$51,575.27	\$127,454.96
Crawford	1.750%	\$624.66	\$173,811.73	\$137,959.88	\$312,396.26
Crittenden	2.750%	\$0.00	\$130,507.11	\$31,096.43	\$161,603.53
Cross	2.000%	\$0.00	\$31,582.07	\$7,922.47	\$39,504.54
Dallas	2.000%	\$0.00	\$5,281.27	\$4,820.11	\$10,101.39
Desha	1.500%	\$140.73	\$14,632.35	\$13,193.17	\$27,966.24
Drew	2.250%	\$0.00	\$21,760.37	\$33,662.27	\$55,422.63
Faulkner	0.500%	\$569.43	\$78,950.29	\$41,668.21	\$121,187.93
Franklin	2.000%	\$0.00	\$53,936.62	\$47,230.71	\$101,167.32
Fulton	2.000%	\$321.33	\$8,262.86	\$4,741.79	\$13,325.98
Garland	1.500%	\$1,115.16	\$161,361.73	\$82,874.20	\$245,351.09
Grant	1.250%	\$110.15	\$10,949.31	\$7,353.71	\$18,413.17
Greene	1.750%	\$115.78	\$29,946.15	\$16,588.79	\$46,650.72
Hempstead	2.000%	\$230.52	\$26,344.70	\$11,430.18	\$38,005.39
Hot Spring	1.500%	\$0.00	\$13,204.14	\$11,356.62	\$24,560.75
Howard	2.750%	\$159.31	\$32,271.31	\$13,808.01	\$46,238.62
Independence	1.500%	\$377.66	\$46,316.35	\$26,081.85	\$72,775.86
Izard	0.500%	\$0.00	\$2,936.61	\$798.29	\$3,734.91

Jackson	2.250%	\$89.13	\$26,490.77	\$9,258.69	\$35,838.59
Jefferson	1.250%	\$699.41	\$61,337.67	\$69,422.40	\$131,459.48
Johnson	1.000%	\$240.44	\$12,239.24	\$16,921.64	\$29,401.32
Lafayette	2.250%	\$0.00	\$2,643.53	\$0.00	\$2,643.53
Lawrence	2.500%	\$0.00	\$12,843.19	\$3,576.04	\$16,419.23
Lee	1.000%	\$0.00	\$9,710.15	\$1,592.77	\$11,302.92
Lincoln	2.000%	\$0.00	\$6,172.56	\$4,539.49	\$10,712.05
Little River	2.250%	\$0.00	\$21,340.87	\$8,115.87	\$29,456.74
Logan	2.000%	\$479.82	\$30,724.75	\$23,574.81	\$54,779.37
Lonoke	1.000%	\$662.43	\$92,169.74	\$51,123.78	\$143,955.96
Madison	2.000%	\$2,434.44	\$84,662.17	\$41,951.44	\$129,048.06
Marion	1.750%	\$0.00	\$12,332.64	\$6,491.40	\$18,824.04
Miller	1.250%	\$87.03	\$40,970.86	\$16,496.53	\$57,554.42
Mississippi	2.500%	\$0.00	\$59,013.03	\$38,888.62	\$97,901.65
Monroe	0.000%	\$0.00	\$0.00	\$0.00	\$0.00
Montgomery	3.000%	\$0.00	\$17,797.76	\$8,041.03	\$25,838.78
Nevada	2.000%	\$0.00	\$4,311.57	\$5,093.75	\$9,405.31
Newton	1.000%	\$121.37	\$5,436.31	\$1,380.48	\$6,938.16
Ouachita	3.000%	\$193.56	\$42,664.56	\$41,064.92	\$83,923.03
Perry	2.500%	\$0.00	\$15,279.80	\$10,377.58	\$25,657.37
Phillips	2.000%	\$99.09	\$42,255.13	\$25,361.51	\$67,715.73
Pike	2.000%	\$113.71	\$9,836.95	\$4,100.48	\$14,051.14
Poinsett	1.250%	\$0.00	\$9,575.19	\$4,610.93	\$14,186.12
Polk	2.000%	\$78.75	\$23,618.04	\$14,049.41	\$37,746.20
Pope	1.000%	\$102.67	\$52,763.80	\$47,370.39	\$100,236.87
Prairie	1.500%	\$241.19	\$9,037.32	\$3,317.12	\$12,595.63
Pulaski	1.000%	\$3,792.96	\$1,140,713.34	\$596,506.58	\$1,741,012.88
Randolph	1.250%	\$62.13	\$8,876.84	\$4,514.22	\$13,453.19
St. Francis	2.000%	\$0.00	\$27,638.77	\$10,310.98	\$37,949.75
Saline	0.000%	\$0.00	\$0.00	\$0.00	\$0.00
Scott	2.625%	\$103.24	\$17,575.50	\$8,541.50	\$26,220.24
Searcy	1.500%	\$158.10	\$4,946.35	\$3,786.79	\$8,891.24
Sebastian	1.250%	\$1,786.24	\$389,086.60	\$233,738.04	\$624,610.87
Sevier	2.125%	\$431.78	\$21,526.97	\$6,132.40	\$28,091.15
Sharp	1.000%	\$0.00	\$2,686.84	\$1,568.32	\$4,255.15
Stone	2.000%	\$53.91	\$14,338.08	\$7,447.46	\$21,839.45
Union	1.000%	\$70.03	\$33,185.07	\$20,030.97	\$53,286.07
Van Buren	2.000%	\$146.72	\$6,847.70	\$6,453.95	\$13,448.37
Washington	1.250%	\$29,422.47	\$2,664,440.27	\$1,537,079.63	\$4,230,942.37

White	1.750%	\$132.38	\$85,487.29	\$51,459.07	\$137,078.73
Woodruff	2.000%	\$0.00	\$10,160.38	\$2,933.83	\$13,094.21
Yell	1.875%	\$0.00	\$17,652.94	\$14,603.12	\$32,256.06
Total		\$62,386.68	\$7,879,124.99	\$4,365,707.55	\$12,307,219.23

Source: Center for Business and Economic Research Estimates

Table 48: Estimated State Sales and Use Taxes Paid by University of Arkansas Alumni

Estimated State Sales and Use Taxes Paid by University of Arkansas Alumni				
County	Associate's Degree	Bachelor's Degree	Graduate or Professional Degrees	Total
Arkansas	\$800.45	\$221,522.88	\$90,939.19	\$313,262.52
Ashley	\$0.00	\$52,400.91	\$70,205.88	\$122,606.79
Baxter	\$1,455.87	\$198,303.75	\$84,640.33	\$284,399.95
Benton	\$95,828.76	\$9,866,960.28	\$4,279,671.30	\$14,242,460.33
Boone	\$1,658.10	\$364,776.51	\$172,321.22	\$538,755.82
Bradley	\$444.93	\$24,178.07	\$27,102.51	\$51,725.50
Calhoun	\$0.00	\$10,716.97	\$31,633.47	\$42,350.44
Carroll	\$1,562.64	\$157,674.82	\$85,725.94	\$244,963.41
Chicot	\$361.31	\$26,576.72	\$21,334.02	\$48,272.05
Clark	\$0.00	\$90,115.87	\$89,764.93	\$179,880.79
Clay	\$0.00	\$30,891.19	\$17,892.42	\$48,783.62
Cleburne	\$590.32	\$89,901.77	\$59,782.13	\$150,274.23
Cleveland	\$507.21	\$19,131.99	\$29,343.93	\$48,983.14
Columbia	\$0.00	\$84,346.13	\$62,904.72	\$147,250.84
Conway	\$841.74	\$130,338.55	\$82,872.79	\$214,053.08
Craighead	\$2,691.01	\$490,526.98	\$335,239.27	\$828,457.26
Crawford	\$2,320.15	\$645,586.41	\$512,422.40	\$1,160,328.97
Crittenden	\$0.00	\$308,471.34	\$73,500.65	\$381,971.99
Cross	\$0.00	\$102,641.74	\$25,748.03	\$128,389.76
Dallas	\$0.00	\$17,164.14	\$15,665.36	\$32,829.50
Desha	\$609.81	\$63,406.83	\$57,170.41	\$121,187.05
Drew	\$0.00	\$62,863.28	\$97,246.54	\$160,109.83
Faulkner	\$7,402.57	\$1,026,353.77	\$541,686.73	\$1,575,443.07
Franklin	\$0.00	\$175,294.00	\$153,499.79	\$328,793.79
Fulton	\$1,044.33	\$26,854.31	\$15,410.80	\$43,309.44
Garland	\$4,832.35	\$699,234.17	\$359,121.52	\$1,063,188.04
Grant	\$572.76	\$56,936.41	\$38,239.29	\$95,748.47

Greene	\$430.03	\$111,228.57	\$61,615.49	\$173,274.09
Hempstead	\$749.19	\$85,620.26	\$37,148.08	\$123,517.53
Hot Spring	\$0.00	\$57,217.93	\$49,212.00	\$106,429.94
Howard	\$376.54	\$76,277.65	\$32,637.11	\$109,291.29
Independence	\$1,636.52	\$200,704.17	\$113,021.36	\$315,362.04
Izard	\$0.00	\$38,175.97	\$10,377.83	\$48,553.79
Jackson	\$257.49	\$76,528.88	\$26,747.33	\$103,533.70
Jefferson	\$3,636.94	\$318,955.86	\$360,996.49	\$683,589.29
Johnson	\$1,562.87	\$79,555.03	\$109,990.65	\$191,108.55
Lafayette	\$0.00	\$7,636.87	\$0.00	\$7,636.87
Lawrence	\$0.00	\$33,392.29	\$9,297.70	\$42,689.99
Lee	\$0.00	\$63,115.98	\$10,352.98	\$73,468.95
Lincoln	\$0.00	\$20,060.82	\$14,753.36	\$34,814.17
Little River	\$0.00	\$61,651.40	\$23,445.86	\$85,097.25
Logan	\$1,559.42	\$99,855.43	\$76,618.12	\$178,032.97
Lonoke	\$4,305.80	\$599,103.32	\$332,304.59	\$935,713.72
Madison	\$7,911.94	\$275,152.06	\$136,342.19	\$419,406.20
Marion	\$0.00	\$45,806.96	\$24,110.90	\$69,917.86
Miller	\$452.58	\$213,048.47	\$85,781.96	\$299,283.01
Mississippi	\$0.00	\$153,433.89	\$101,110.41	\$254,544.30
Monroe	\$755.74	\$28,355.77	\$13,158.98	\$42,270.49
Montgomery	\$0.00	\$38,561.81	\$17,422.22	\$55,984.03
Nevada	\$0.00	\$14,012.59	\$16,554.68	\$30,567.27
Newton	\$788.93	\$35,335.99	\$8,973.13	\$45,098.05
Ouachita	\$419.37	\$92,439.88	\$88,973.99	\$181,833.24
Perry	\$0.00	\$39,727.48	\$26,981.70	\$66,709.17
Phillips	\$322.03	\$137,329.17	\$82,424.92	\$220,076.11
Pike	\$369.56	\$31,970.09	\$13,326.55	\$45,666.20
Poinsett	\$0.00	\$49,791.01	\$23,976.82	\$73,767.83
Polk	\$255.93	\$76,758.61	\$45,660.59	\$122,675.14
Pope	\$667.37	\$342,964.72	\$307,907.54	\$651,539.64
Prairie	\$1,045.16	\$39,161.71	\$14,374.18	\$54,581.06
Pulaski	\$24,654.24	\$7,414,636.74	\$3,877,292.75	\$11,316,583.73
Randolph	\$323.08	\$46,159.57	\$23,473.94	\$69,956.60
St. Francis	\$0.00	\$89,825.99	\$33,510.68	\$123,336.68
Saline	\$8,313.25	\$1,098,953.05	\$453,820.71	\$1,561,087.01
Scott	\$255.64	\$43,520.28	\$21,150.39	\$64,926.31
Searcy	\$685.11	\$21,434.18	\$16,409.41	\$38,528.69
Sebastian	\$9,288.42	\$2,023,250.30	\$1,215,437.80	\$3,247,976.53

Sevier	\$1,320.75	\$65,847.19	\$18,757.92	\$85,925.86
Sharp	\$0.00	\$17,464.43	\$10,194.06	\$27,658.50
Stone	\$175.20	\$46,598.77	\$24,204.24	\$70,978.20
Union	\$455.20	\$215,702.98	\$130,201.28	\$346,359.46
Van Buren	\$476.83	\$22,255.03	\$20,975.33	\$43,707.19
Washington	\$152,996.86	\$13,855,089.40	\$7,992,814.06	\$22,000,900.32
White	\$491.68	\$317,524.23	\$191,133.68	\$509,149.59
Woodruff	\$0.00	\$33,021.23	\$9,534.96	\$42,556.18
Yell	\$0.00	\$61,196.85	\$50,624.15	\$111,821.00
Total	\$350,464.01	\$43,958,580.62	\$23,796,220.64	\$68,105,265.27

Source: Center for Business and Economic Research Estimates

In addition to the sales tax paid by University of Arkansas alumni, state income taxes by county and by educational attainment were also estimated²⁹. The following table shows that Arkansas alumni contributed \$130.1 million in income taxes to the state.

Table 49: Estimated State Income Taxes Paid by University of Arkansas Alumni

Estimated State Income Taxes Paid by University of Arkansas Alumni				
Counties	Associate's	Bachelor's	Graduate or Professional	Total
Arkansas	\$1,051.35	\$397,009.40	\$172,247.67	\$570,308.42
Ashley	\$0.00	\$83,229.87	\$134,172.94	\$217,402.81
Baxter	\$1,858.19	\$313,289.75	\$154,810.62	\$469,958.56
Benton	\$151,542.82	\$19,916,199.73	\$9,056,094.32	\$29,123,836.87
Boone	\$2,255.63	\$623,359.36	\$308,621.89	\$934,236.88
Bradley	\$690.24	\$43,244.74	\$52,897.15	\$96,832.13
Calhoun	\$0.00	\$19,761.33	\$69,300.95	\$89,062.27
Carroll	\$1,740.99	\$231,571.35	\$162,370.49	\$395,682.83
Chicot	\$471.37	\$38,883.33	\$38,763.49	\$78,118.19
Clark	\$0.00	\$150,578.75	\$163,792.30	\$314,371.05
Clay	\$0.00	\$48,899.91	\$33,821.48	\$82,721.38
Cleburne	\$753.18	\$156,189.02	\$119,804.71	\$276,746.91
Cleveland	\$790.87	\$37,257.47	\$57,254.44	\$95,302.79
Columbia	\$0.00	\$154,878.15	\$118,651.15	\$273,529.30
Conway	\$1,190.52	\$237,141.34	\$161,268.53	\$399,600.39
Craighead	\$3,610.70	\$849,878.84	\$683,550.38	\$1,537,039.93
Crawford	\$3,406.49	\$1,132,862.26	\$1,035,943.02	\$2,172,211.76
Crittenden	\$0.00	\$583,645.14	\$142,116.81	\$725,761.95
Cross	\$0.00	\$194,028.85	\$50,332.73	\$244,361.58

Dallas	\$0.00	\$27,786.46	\$29,386.69	\$57,173.16
Desha	\$683.65	\$108,059.46	\$118,933.15	\$227,676.26
Drew	\$0.00	\$111,804.04	\$187,088.19	\$298,892.24
Faulkner	\$10,999.10	\$1,860,791.03	\$1,084,046.64	\$2,955,836.77
Franklin	\$0.00	\$289,608.88	\$307,725.90	\$597,334.78
Fulton	\$1,189.75	\$43,299.35	\$28,836.67	\$73,325.77
Garland	\$6,654.31	\$1,196,388.24	\$708,036.17	\$1,911,078.72
Grant	\$890.26	\$101,420.27	\$76,141.76	\$178,452.29
Greene	\$569.38	\$200,043.25	\$115,161.97	\$315,774.60
Hempstead	\$918.35	\$153,673.41	\$66,299.16	\$220,890.92
Hot Spring	\$0.00	\$88,757.05	\$93,613.15	\$182,370.20
Howard	\$485.44	\$122,284.11	\$57,117.10	\$179,886.65
Independence	\$2,241.04	\$341,136.71	\$227,058.25	\$570,436.00
Izard	\$0.00	\$65,314.36	\$15,878.77	\$81,193.13
Jackson	\$328.25	\$147,632.10	\$51,882.21	\$199,842.56
Jefferson	\$5,215.32	\$580,951.17	\$691,020.15	\$1,277,186.64
Johnson	\$2,237.16	\$126,665.80	\$208,732.56	\$337,635.52
Lafayette	\$0.00	\$11,976.16	\$0.00	\$11,976.16
Lawrence	\$0.00	\$52,240.47	\$16,064.71	\$68,305.17
Lee	\$0.00	\$127,593.06	\$16,398.84	\$143,991.89
Lincoln	\$0.00	\$34,801.28	\$25,706.86	\$60,508.13
Little River	\$0.00	\$106,391.56	\$43,147.95	\$149,539.51
Logan	\$2,202.72	\$156,272.02	\$135,171.58	\$293,646.33
Lonoke	\$7,129.52	\$1,132,268.91	\$667,225.11	\$1,806,623.53
Madison	\$11,515.28	\$455,095.70	\$254,940.05	\$721,551.03
Marion	\$0.00	\$79,821.16	\$44,983.52	\$124,804.69
Miller	\$660.59	\$367,822.57	\$165,821.44	\$534,304.60
Mississippi	\$0.00	\$261,568.81	\$193,758.41	\$455,327.22
Monroe	\$1,061.82	\$50,876.85	\$25,743.27	\$77,681.93
Montgomery	\$0.00	\$65,929.46	\$32,652.70	\$98,582.16
Nevada	\$0.00	\$22,657.32	\$28,957.28	\$51,614.61
Newton	\$892.60	\$55,950.19	\$7,553.53	\$64,396.32
Ouachita	\$585.07	\$155,941.43	\$165,240.26	\$321,766.76
Perry	\$0.00	\$73,314.95	\$52,834.14	\$126,149.09
Phillips	\$397.08	\$242,718.14	\$154,444.00	\$397,559.23
Pike	\$468.26	\$47,847.08	\$24,853.95	\$73,169.28
Poinsett	\$0.00	\$81,585.13	\$40,809.24	\$122,394.36
Polk	\$282.15	\$124,957.71	\$83,154.59	\$208,394.46
Pope	\$799.06	\$573,174.55	\$585,925.95	\$1,159,899.56

Prairie	\$1,539.88	\$67,333.91	\$25,629.33	\$94,503.12
Pulaski	\$35,959.70	\$13,503,276.43	\$8,020,374.68	\$21,559,610.81
Randolph	\$382.45	\$71,806.65	\$45,449.45	\$117,638.54
St. Francis	\$0.00	\$139,601.36	\$58,235.31	\$197,836.67
Saline	\$13,228.72	\$2,087,463.70	\$915,501.22	\$3,016,193.64
Scott	\$275.81	\$75,272.52	\$35,976.58	\$111,524.90
Searcy	\$834.22	\$28,356.21	\$28,337.36	\$57,527.79
Sebastian	\$13,304.59	\$3,732,544.39	\$2,419,351.28	\$6,165,200.27
Sevier	\$1,723.05	\$111,980.87	\$31,390.15	\$145,094.06
Sharp	\$0.00	\$24,592.41	\$17,206.47	\$41,798.88
Stone	\$179.24	\$74,359.88	\$48,843.36	\$123,382.48
Union	\$647.54	\$382,273.90	\$265,420.23	\$648,341.67
Van Buren	\$526.85	\$32,145.29	\$40,239.98	\$72,912.13
Washington	\$224,094.60	\$25,312,050.29	\$16,182,948.26	\$41,719,093.15
White	\$718.24	\$558,282.55	\$365,147.82	\$924,148.62
Woodruff	\$0.00	\$63,261.42	\$17,483.51	\$80,744.93
Yell	\$0.00	\$97,053.56	\$92,957.15	\$190,010.71
TOTAL	\$521,183.42	\$81,419,984.15	\$48,158,653.05	\$130,099,820.62

Source: Center for Business and Economic Research Estimates

Overall Economic Impact

The economic impacts of the University of Arkansas reach far beyond the immediate environment of the University's physical location. The economic impact of the University of Arkansas was calculated by accounting for various activities that occur from the operation of a large research university. Some of these impacts are the direct result of University spending on payroll and other expenditures, while others occur through a myriad of different sources such as expenditures of students attending the University, expenditures of visitors to the University, and business expenditures of University research-generated companies at the Arkansas Research and Technology Park, and other economic activities associated with the university.

Researchers from the Center for Business and Economic Research estimate that in 2018, activities associated with the University of Arkansas generated a total economic impact of \$2.2 billion in the state of Arkansas. This economic impact includes \$1.5 billion in recurring annual economic impact and \$714.4 million in one-time construction impacts. The annual business operations of the University contributes \$923.1 million to the overall economic impact while student spending contributed \$453.5 million. The economic impact of the operations of tenants in the Arkansas Research and Technology Park adds \$64.1 million to the total. Visitors to the University's athletic events, associated facilities, admissions office and students contribute \$97.1 million in spending in 2018 and the economic impact generated by University affiliated volunteers and service learning programs is \$5.2 million.

Direct expenditures from the University of \$948.1 million in the state of Arkansas generate an overall \$2.2 billion in economic activity, implying an output multiplier of 2.39. This means for every dollar of direct expenditures by the University within Arkansas, the total economic impact generated is \$2.38. In the 2018 fiscal year, state appropriations of \$166.8 million were leveraged 13.56 times. Put another way, each dollar appropriated by the state of Arkansas to the University generate an economic impact of \$13.56. The operations of the University and associated economic activities contributed \$89.5 million in state and local taxes in the form of income taxes, business taxes, property taxes and others.

In the Northwest Arkansas region, the University's economic impact is estimated at \$1.4 billion in 2018. This economic impact includes \$1.3 billion in recurring annual economic impact and \$67.6 million in one-time construction impacts. The annual business operations of the University contribute \$770.3 million to the overall economic impact while student spending contributes \$453.5 million. The economic impact of the operations of tenants in the Arkansas Research and Technology Park adds \$61.4 million to the total.

Table 50: 2018 University of Arkansas Economic Impact

2018 University of Arkansas Economic Impact		
	Arkansas	Northwest Arkansas
University Operational Expenditures Economic Impact	\$923,121,527	\$770,388,247
Spending by Students	\$453,468,717	\$453,468,717
Spending by Visitors to Students	\$52,301,584	\$52,301,584
Spending by Visitors to the Office of Admissions	\$1,661,246	\$1,661,246
Spending by Visitors to Conferences	\$111,350	\$111,350
Spending by Visitors to Garvan Woodland Gardens	\$8,460,660	N/A

Spending by Visitors to Athletic Events	\$38,869,132	\$34,638,243
ARTP Operational Expenditure Economic Impact	\$64,102,627	\$61,453,060
Impact of Service Learning and Capstone Projects	\$2,322,341	N/A
University Volunteer Hours Economic Impact	\$2,911,483	N/A
<i>Subtotal of Annual Economic Impact</i>	<i>\$1,547,330,667</i>	<i>\$1,374,022,447</i>
University Construction Activity*	\$714,419,584	\$67,667,367
Grand Total Economic Impact	\$2,261,750,251	\$1,441,689,814

An important indirect impact of the University of Arkansas occurred via the 77,183 alumni who accounted for 2.6 percent of the state’s population but earn \$2.7 billion in wages or 7.5 percent of the state’s total wages earned. These alumni paid \$130.1 in state income taxes, \$68.1 million in state sales taxes and \$12.3 million in county sales taxes in 2014.

In addition to these fiscal impacts, the University has placed at its forefront a mission to equip Arkansans to participate fully in the modern knowledge-based economy. In 2017, the University received 54 invention disclosures, filed 8 new patent applications, and received 13 patent issues. Since 2010, the University received 334 disclosures of intellectual property, filed 278 new patent applications, and received 121 patent issues. Many centers and institutes fulfill the University’s outreach mission by providing services to the community that assist children, enhance civic knowledge and participation, and make Arkansas businesses more profitable.

Appendix

Use of IMPLAN in this study

IMPLAN is a regional impact model that enables the evaluation of the economic impact of specific activities such as construction or operation of public works projects, as well as retail, wholesale, manufacturing, and service sales within an economy. IMPLAN was originally developed by the U.S. Department of Agriculture, the Forest Service in cooperation with the Federal Emergency Management Agency (FEMA), the U.S. Department of Interior Bureau of Land Management, and the University of Minnesota to assist the Forest Service in land and resource management planning³⁰.

The basic data sources for the current edition of the IMPLAN database and the models used in this study are the Input-Output Accounts of the United States, developed by the U.S. Department of Commerce, Bureau of Economic Analysis (BEA), and county income and employment data published by BEA and the Bureau of Labor Statistics (BLS). The model reflects 2017 industrial structure and technology, and 2017 prices. Trade flows and the results of this analysis were adjusted to reflect prices of the respective years. Economic output values and state and local tax revenues are presented in 2018 dollars.

IMPLAN uses a 536-sector input-output model to measure the effects of three types of impacts: direct, indirect, and induced. Direct impacts consist of employment and purchases of goods and services in the region resulting from the activity being evaluated, in this case, construction and services related to it and scientific research and development. Indirect (inter-industry) impacts consist of goods and services purchased by the firms, which supply inputs consumed in the direct activity. Induced impacts consist of increased household purchases of goods and services in the region by employees of direct and indirect employers. The model generates multipliers, which summarize the magnitude of the indirect and induced effects generated by a given direct change, to estimate changes in output, income, and employment. In other words, the multiplier is the ratio of total impact to direct impact.

In the IMPLAN model, inter-industry relationships (use and make coefficients) are quantified based on data on the production functions of the different industries in the region. The IMPLAN model was used to estimate multipliers based on those coefficients in the state of Arkansas and the Northwest Arkansas region. Direct spending, total economic activity, total labor income, total employment, and total property income were generated by this model.

Student Expenditure Survey

Q1 Where is your local residence?

- Bella Vista (1)
- Bentonville (2)
- Elkins (3)
- Farmington (4)
- Fayetteville (5)
- Goshen (6)
- Greenland (7)
- Johnson (8)
- Lincoln (9)
- Prairie Grove (10)
- Rogers (11)
- Springdale (12)
- Siloam Springs (13)
- Tontitown (14)
- West Fork (15)
- Washington County (Rural) (16)
- Benton County (Rural) (17)
- Other (please specify) (18)

Q2 What is your local zip code? _____

Q3 Do you live in:

- University housing (not Greek housing) (1)
- A rental property (not owned by the University) (2)
- Self-owned property (3)
- Greek housing (4)
- Parent-owned property (5)
- Other (please specify) (6) _____

Display This Question:

If Do you live in: = Self-owned property

Q4 What is your best estimate of the current market value of your home (the amount for which you might sell it)?

- ___ Less than \$50,000 (1)
- ___ \$50,000 - \$99,999 (2)
- ___ \$100,000 - \$149,999 (3)
- ___ \$150,000 - \$199,999 (4)
- ___ \$200,000 - \$299,999 (5)
- ___ \$300,000 - \$399,999 (6)
- ___ \$400,000 - \$499,999 (7)
- ___ \$500,000 - \$749,999 (8)
- ___ \$750,000 - \$999,999 (9)
- ___ \$1,000,000 or more (10)

Q5 How many people live in your Northwest Arkansas household (include yourself)? ____

Q7 Please estimate your average MONTHLY expenditures in Northwest Arkansas paid to the University or local businesses in the following categories. Include entire housing and utility payments regardless of where the check is sent. If you are sharing expenses, please respond with only that part of the expenses you pay.

Please fill out the fields applicable to your housing situation. **Please enter numeric text in U.S. dollars only:**

- Rent for a NON-university owned property (total amount paid to landlord): (1) _____
- Mortgage (exclude tax and insurance escrow payments): (2) _____
- Cell phone (only if 479 area code): (3) _____
- Groceries (do not include meal plan): (4) _____
- Restaurants: (5) _____
- Bars and nightclubs: (6) _____
- University sporting events: (7) _____
- Live performances (Walton Arts Center, Theater Squared, The Walmart AMP, etc.): (8) _____
- Museum visits: (9) _____
- Entertainment (movie tickets, bowling, roller skating, etc.) (10) _____
- Clothing: (11) _____
- Books (enter amount per semester): (12) _____
- Laundry/dry cleaning: (13) _____
- Medical and dental out of pocket: (14) _____
- Pharmacy (prescription and non-prescription): (15) _____
- General merchandise (household furnishings, electronics, furniture, appliances, etc.): (16) _____
- Motor vehicle purchases, repair, fuel: (17) _____
- Local transit (Uber, Lyft, etc.): (18) _____
- Other personal services (barber shop, beauty shop, fitness): (19) _____

Q9 Estimate month utility payment if not included in rent:

Water and Sewer: (1) _____

Electric: (2) _____

Internet: (3) _____

Natural gas and/or heating oil: (4) _____

Cable television: (5) _____

Landline Telephone: (6) _____

Other: (7) _____

Q10 Do you own a vehicle?

Yes (1)

No (2)

Skip To: Q16 If Do you own a vehicle? = No

Q11 How many vehicles do you own that are registered locally (in Northwest Arkansas)?

0 (1)

1 (2)

2 (3)

3 (4)

4 (5)

5 or more (6)

Q12 What is the total market value of all your vehicles that are registered locally?

Less than \$5,000 (1)

\$5,000 - \$9,999 (2)

\$10,000 - \$14,999 (3)

\$15,000 - \$19,999 (4)

\$20,000 - \$29,999 (5)

\$30,000 - 39,999 (6)

\$40,000 or more (7)

Don't know (8)

Q16 How many times have you utilized Razorback Transit in the last 12 months?

- ___ 0 (1)
- ___ 1 (2)
- ___ 2 (3)
- ___ 3 (4)
- ___ 4 (5)
- ___ 5 or more (6)

End of Block: Vehicles

Start of Block: Visitors

Q13 How many visitors (parent, friends, etc.) have you had in the last twelve months in Northwest Arkansas? Please count each visit separately, even if the same person visited more than once. Only include your visitors and do not include visitors of roommates.

Please enter numeric text only: _____

Skip To: End of Block If How many visitors (parent, friends, etc.) have you had in the last twelve months in Northwest Ark... <= 0

Q14 How many days did your visitors typically stay (per visit)?

Please enter numeric text only: ____

Q15 Please estimate how many nights your visitors spent in hotels or motels (per visit): ____

Q17 Please estimate your guests' expenditures throughout the duration of their stay in Northwest Arkansas paid to the University or local businesses in the following categories.

Please fill out the fields applicable to your guests' visit. **Please enter numeric text in U.S. dollars only:**

University sporting events (1) _____

Live performances (Walton Arts Center, Theater Squared, The Walmart AMP, etc.) (2) _____

Restaurants and bars (3) _____

Local transportation (Uber, Lyft, etc.) (4) _____

Retail purchases (5) _____

Museum visits (6) _____

Thank you

Athletics Visitors Expenditure Survey

1. Are you attending today's game? _____
2. In what state do you reside? _____
3. In what city and county do you reside in? City: _____ County: _____
4. How many people are in your party today? (including yourself)
 Number of Adults: _____ Number of Children: _____
5. Did you travel to Fayetteville today primarily for the Razorback game?
6. How many days do you plan on being in Northwest Arkansas? _____
7. If your party is staying overnight in Northwest Arkansas, please indicate the number of nights for each applicable type of accommodation. If your party is staying in a hotel/motel or in an RV park, please specify the number of rooms/sites your party is occupying each night.
 Hotel/Motel _____ Number of rooms _____
 RV Park _____ Number of sites _____
 Friends/Family _____
 Other _____
8. Please estimate the total amount that you will spend on accommodations. _____
9. Please indicate the city of your overnight accommodations if applicable.
 City: _____
10. Approximately how many times will your party purchase meals at Northwest Arkansas Restaurants?
 In Fayetteville? Breakfast ___ (# of times) Lunch ___ (# of times) Dinner ___ (# of times)
 In other Northwest Arkansas cities? Breakfast ___ (# of times) Lunch ___ (# of times) Dinner ___ (# of times)
11. What is the total amount that you anticipate your party will spend on meals in Northwest Arkansas? (exclude stadium) _____
12. Please indicate which of these your party plans to do while in Fayetteville or elsewhere in Northwest Arkansas:

Northwest Arkansas:	Fayetteville	Other Northwest Arkansas
Purchase Fuel (Car or airplane)	___ Yes ___ No	___ Yes ___ No
Retail Shopping	___ Yes ___ No	___ Yes ___ No
Buy Groceries/Tailgating Gear	___ Yes ___ No	___ Yes ___ No
Purchase Packaged Liquor	___ Yes ___ No	___ Yes ___ No
Rent a Vehicle	___ Yes ___ No	___ Yes ___ No

Use a Taxi (Uber/Lyft)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
See a Movie	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Go to a Bar/Nightclub	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Other things (haircut, tattoo, etc.)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

13. What is the total amount YOUR PARTY expects spent on these items in Northwest Arkansas on this trip? _____

Thank you. Enjoy the game.

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