THE ECONOMIC IMPACT OF THE UNIVERSITY OF ARKANSAS

Produced for the Office of the Chancellor



Center for Business and Economic Research

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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 2014, an impact in excess of \$1.2 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 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. This 2014 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 \$1.2 billion includes \$975.6 million in recurring operational impacts and \$236.8 million in one-time construction impacts.
- Direct expenditures of \$534.4 million within Arkansas by the University of had an economic output multiplier of 2.27 in 2014.
- In the 2014 fiscal year, the \$173.8 million in state appropriations to the University were leveraged 6.98 times. Put another way, each dollar appropriated by the state of Arkansas to the University generated an economic impact of \$6.98.
- The 2014 payroll at the University of Arkansas was \$317.9 million, and the institution directly employed 1,352 faculty and 3,108 staff.
- Spending by students contributed \$307.4 million and spending by visitors added \$35.8 million to the Northwest Arkansas economy in 2014.
- The operations of the University and associated economic activities contributed \$11.1 million in state income taxes, \$21.9 million in state sales taxes, \$10.2 million in local sales taxes, and \$3.5 million in property taxes.
- 68,622 alumni, accounting for 2.0 percent of the state's population, earned \$2.3 billion in wages or 9.0 percent of the state's total and paid \$114.8 in state income taxes, \$54.9 million in state sales taxes, and \$11.2 million in county sales taxes.
- 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 \$932.3 million in 2014. This economic activity included \$907.2 million in recurring operational impacts and \$25.0 million in one-time construction impacts.

Table of Contents

Executive Summary	ii
Table of Contents	iii
List of Tables	v
List of Figures	v
Acknowledgements	vi
Introduction	1
Economic Impact	3
Impact of University Spending	4
Operational Impacts	6
Construction Impacts	7
Direct Tax Payments	8
Impact of Student Spending	9
Impact of New non-University Student Housing	13
Indirect Tax Payments	13
Impact of Arkansas Research and Technology Park and Technology Transfer	14
Arkansas Research and Technology Park	14
Technology Commercialization Office (TCO) and Technology Ventures	15
Impact of Visitor Spending	16
Local Impact of Visitors to Students of the University of Arkansas	16
Local Impact of Visitors to the University of Arkansas Office of Admissions	16
Local Impact of Spending by Conference Attendees	17
Local Impact of Spending of Athletic Events Visitors	20
Alumni Impacts	23
Increased Earnings	25
Tax and Transfer Effects	27
Other Community Impacts	32
Outreach Effects	32
Local Impact of University Charitable Activities	35
Knowledge Transfer	35
Overall Economic Impact	38
Appendix	40

	Use of IMPLAN in this study	. 40
	Student Expenditure Survey	. 41
	Athletics Visitors Expenditure Survey	. 46
Re	eferences	. 47

List of Tables

Table 1: University of Arkansas Students, Faculty, and Staff by Residence	3
Table 2: University of Arkansas Business Expenditures, 2014	5
Table 3: Estimated Taxes Paid by University of Arkansas Employees	6
Table 4: University of Arkansas Business Expenditures Economic Impact in Arkansas	7
Table 5: University of Arkansas Business Expenditures Economic Impact in Northwest Arkansas	7
Table 6: University of Arkansas Construction Economic Impact in Arkansas	8
Table 7: University of Arkansas Construction Economic Impact in Northwest Arkansas	8
Table 8: University of Arkansas Property Acreage and Value	9
Table 9: University of Arkansas Sales and Use Tax Payments	9
Table 10: Average Monthly Spending per Student	10
Table 11: Estimated Student Spending	12
Table 12: New non-University Student Housing	13
Table 13: Estimated Property Taxes Paid in Washington County	14
Table 14: Estimated Property Taxes Paid in Northwest Arkansas	14
Table 15: Overall Economic Impact of ARTP (2013-14)	15
Table 16: Faculty, Staff, and Student Visitor Spending	16
Table 17: Visitor Information from the Office of Admissions	17
Table 18: Visitors to Conferences and Camps Hosted by University Housing	18
Table 19: Overall Spending of Athletic Event Visitors	22
Table 20: University of Arkansas: Academic Departments and Degrees Offered	23
Table 21: University of Arkansas Alumni Currently Living in Arkansas	25
Table 22: Arkansas Median Earnings by Educational Attainment	26
Table 23: University of Arkansas Alumni Wage Estimates	28
Table 24: University of Arkansas Alumni Income as a Percent of Total Income (2014)	29
Table 25: Estimated Annual County Sales and Use Taxes Paid by Alumni	30
Table 26: Estimated State Sales and Use Taxes Paid by University of Arkansas Alumni	30
Table 27: Estimated State Income Taxes Paid by University of Arkansas Alumni	31
Table 28: University of Arkansas Units Providing Support to Underrepresented Groups	33
Table 29: University of Arkansas Units Providing Education Outreach to Arkansas School Children	33
Table 30: University of Arkansas Units Engaged in Civic Participation and Community Involvement \dots	34
Table 31: University of Arkansas Units Transferring Specific Expertise and Knowledge	36
Table 32: 2014 University of Arkansas Economic Impact	38
List of Figures	
Figure 1: University of Arkansas Enrollment 2004-2014	24
Figure 2: University of Arkansas Degrees Awarded 2004-2014	24
Figure 3: Percentage of Population with Higher Education Degrees	27

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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 System¹.

The University of Arkansas describes its mission as follows: "The mission of the University of Arkansas is to provide an internationally competitive education for undergraduate and graduate students in a wide spectrum of disciplines; contribute new knowledge, economic development, basic and applied research and creative activity; and provide service to academic/professional disciplines and society, all aimed at fulfilling its public land-grant mission to serve Arkansas and beyond as a partner, resource, and catalyst." In 2014, the University fulfills this mission with 1,352 faculty members and 3,108 staff that serve some 26,237 students².

Since its founding in 1871, the University of Arkansas has awarded a total of 178,396 degrees³. Of these, 118,620 are bachelor's degrees, 44,433 are master's degrees, and 6,020 are doctorates. Annual enrollment counts during the same period total more than 916,211^{4,5}. In 2014, the University of Arkansas hosts 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 227 different degree programs and certifications (the Honors College does not offer any degrees)⁶. 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 Chancellor 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 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, 2014 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 2014, the University received state appropriations totaling \$173.8 million. This state support is offered due to the recognition of the importance of having a strong research university to the economic well-being of Arkansas.

For this report data were collected for the study 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 \$1.2 billion in 2014. This impact comes from the University via operations, construction, technology transfer, student expenditures, and visitor spending. The rest of the report describes these impacts in great detail.

Economic Impact

Northwest Arkansas is the home of the state's flagship university campus and the region benefits from the economic activity generated by the operation of the University of Arkansas and by its various constituents. The majority of the local impact is concentrated in the city of Fayetteville, however, the University's operations and impacts in terms of property owned and constituents' residences stretch over the entire area of the Fayetteville-Springdale-Rogers metropolitan statistical area (also known as Northwest Arkansas), which includes Benton, Madison and Washington Counties in Arkansas and McDonald County in Missouri. As seen in the table below, the vast majority of students, faculty, and staff that are affiliated with the University of Arkansas reside in the city of Fayetteville. According to the most recent information from the U.S. Census Bureau, 24,540 students, faculty, and staff at the University of Arkansas account for 31.1 percent of the 78,960 people residing in Fayetteville. In comparison, the grand total of 30,018 students, faculty, and staff at the University of Arkansas account for 6.1 percent of the 491,966 people residing in all of Northwest Arkansas⁷. The students, faculty and staff provide numerous economic impacts which are detailed throughout this report.

Table 1: University of Arkansas Students, Faculty, and Staff by Residence

University of Arkansas Students, Faculty and Staff by Residence					
City/County	Percent of Students	Estimate of Student Residents	Percent of Faculty/Staff	Estimate of Faculty/ Staff Residents	
Bella Vista	1.6%	411	0.5%	21	
Bentonville	2.7%	693	1.1%	45	
Elkins	0.3%	79	1.8%	70	
Farmington	1.3%	333	3.7%	148	
Fayetteville	83.6%	21,794	69.5%	2,746	
Goshen	0.3%	79	0.2%	7	
Greenland	0.3%	79	0.1%	5	
Lincoln	0.6%	157	1.0%	40	
Lowell	0.0%	-	1.1%	42	
Madison County	0.0%	-	0.9%	30	
Other	1.5%	399	0.1%	4	
Prairie Grove	1.0%	264	3.2%	125	
Rogers	1.5%	389	2.0%	80	
Siloam Springs	0.0%	-	0.5%	30	
Springdale	2.8%	740	9.4%	371	
Tontitown	0.0%	-	0.3%	-	
Washington County- other	0.3%	79	1.5%	61	
West Fork	0.0%	-	2.9%	115	
Benton County- other	2.2%	573	0.5%	18	
Total		26,067		3,951	

Source: Center for Business and Economic Research Survey Data⁸ and University of Arkansas Payroll

Impact of University Spending

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 \$858.0 million in the 2014 fiscal year (or the 2013-2014 academic year). Since the University of Arkansas does not maintain records by geography of spending, Jim Hasbarger and Cheryl Canfield from the Office of Business Affairs meticulously compiled spending invoices by zip codes that were within Northwest Arkansas and the state of Arkansas⁹ 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 2014 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 \$534.4 million and equaled 62.3 percent of the University's total spending, while \$368.7 million or 43.0 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 2014, payroll expenditures were nearly \$318.0 million or 37.1 percent of the total annual spending. This annual payroll expenditure occurred within Northwest Arkansas. Spending on facilities equaled \$215.9 million or 25.2 percent of the total spending. One-time construction spending of \$158.1 million accounted for most of the expenditures on facilities in the 2014 fiscal year. 79.5 percent of the spending on facilities remained in Arkansas and 14.6 percent remained in Northwest Arkansas. The University spent \$202.1 million or 23.5 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, nearly \$22.0 million or 10.9 percent stayed in Arkansas and \$8.0 million or 4.0 percent stayed in Northwest Arkansas. Wholesale and retail purchases accounted for 11.1 percent of the total University spending. These purchases included food and beverages, equipment, office supplies, health and lab supplies, agricultural supplies, and more. 20.2 percent of wholesale and retail expenditures were made in Arkansas and 10.6 percent of these expenditures were made in Northwest Arkansas.

Table 2: University of Arkansas Business Expenditures, 2014

University of Arkansas Business Expenditures in Fiscal Year 2014				
Category	All Spending	Arkansas Spending	NWA Spending	
Payroll	\$317,944,711	\$317,944,711	\$317,944,711	
	Facilities			
Building & Maintenance Operations	\$38,369,594	\$7,287,975	\$2,971,337	
Contract Construction	\$158,071,973	\$147,435,420	\$14,979,150	
Electric	\$9,975,381	\$9,975,381	\$9,401,784	
Gas	\$3,579,867	\$3,579,867	\$1,031,900	
Water	\$2,312,819	\$2,127,392	\$2,065,391	
Waste Management	\$80,257	\$80,257	\$-	
Rent	\$3,507,621	\$1,114,154	\$1,114,079	
Facilities Subtotal	\$215,896,884	\$171,600,862	\$31,563,683	
Wholes	ale & Retail Purc	hases		
Food & Beverages	\$1,656,089	\$1,081,168	\$989,012	
Chartwells	\$2,840,215	\$1,420,107	\$1,420,107	
Equipment & Repairs	\$24,127,009	\$3,843,934	\$931,168	
Office Supplies	\$5,897,796	\$1,690,540	\$738,807	
Office Supplies (PCard)	\$14,114,004	\$5,263,611	\$4,139,958	
Health & Lab Supplies	\$32,330,289	\$1,881,047	\$405,200	
Agricultural Supplies	\$2,322,928	\$1,263,526	\$123,379	
Other Supplies	\$9,556,467	\$2,516,041	\$1,313,795	
Purchase for Resale	\$2,052,105	\$289,288	\$20,089	
Other Capital Purchases	\$759,776	\$112,635	\$20,151	
Wholesale & Retail Subtotal	\$95,656,679	\$19,361,898	\$10,101,666	
	Services			
Advertising/Marketing/Promotion	\$2,461,441	\$1,364,530	\$368,487	
Professional Services	\$14,198,694	\$8,513,086	\$2,327,997	
Honorarium	\$730,235	\$117,371	\$83,817	
Computer/Data Services	\$2,495,841	\$360,200	\$14,202	
Auto Repairs & Tires	\$2,100,551	\$1,433,539	\$607,754	
Event Officers	\$49,543	\$49,543	\$42,906	
Management/Consulting	\$128,470,953	\$1,021,030	\$157,454	
Subscriptions/Publications	\$8,338,977	\$1,371,475	\$1,221,821	
Equipment Rent/Lease (exclude autos)	\$2,188,429	\$548,005	\$518,256	
Other Services	\$34,279,478	\$5,291,542	\$2,138,842	
Insurance	\$3,568,593	\$52,032	\$46,949	
Postal	\$1,750,777	\$1,238,192	\$378,521	
Print	\$1,425,193	\$578,719	\$128,235	
Services Subtotal	\$202,058,704	\$21,939,262	\$8,035,240	
	Travel			

Grand Total	\$858,046,529	\$534,394,055	\$368,730,121
Travel Subtotal	\$26,489,551	\$3,547,323	\$1,084,822
Incidentals	\$3,500,812	\$748,200	\$-
Transportation	\$4,988,894	\$706,576	\$484,572
Meals	\$1,244,579	\$337,459	\$54,975
Registration	\$999,340	\$80,540	\$-
Air	\$7,428,866	\$-	\$-
Hotel & Lodging	\$8,327,061	\$1,674,547	\$545,274

Researchers from the Center for Business and Economic Research estimate that full-time, part-time and graduate assistants generated \$11.1 million in state income taxes for 2014. The state income taxes were calculated from average wages that were obtained after deducting the fringe benefits that the University provides its employees. University of Arkansas employees also paid an estimated \$7.4 million in state sales taxes on the wages that would be subject to sales and use taxes (39 percent, according to the most recent estimates from the U.S. Bureau of Labor Statistics Consumer Expenditure Survey)¹⁰. Assuming a 3.0 percent average local sales tax, University employees paid \$3.7 million in sales taxes to local governments.

Table 3: Estimated Taxes Paid by University of Arkansas Employees

Estimated 2014 State Taxes Paid by University of Arkansas Employees					
State Income Tax	\$11,061,328				
State Sales Tax	\$7,439,906				
Local Sales Tax	\$3,719,953				

Source: Center for Business and Economic Research Calculations

The economic impact of spending from the University of Arkansas in fiscal year 2014 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)¹¹. 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.

Operational 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 1.54 in the 2014 fiscal year. This means for every dollar of business expenditures at the University, the total economic impact generated within the state was \$1.54. In 2014, these annual business

expenditures generated an economic impact of \$573.8 million in Arkansas. These activities directly supported 5,282.0 jobs in Arkansas and a total of 6,948.7 jobs through indirect and induced effects. Total labor income generated in Arkansas by the annual business expenditures was \$350.3 million in 2014.

Table 4: 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	5,282.0	\$285,967,161	\$346,291,134	\$372,182,892		
Indirect Effect	83.4	\$3,712,509	\$6,583,101	\$11,308,054		
Induced Effect	1,583.4	\$60,593,738	\$117,015,944	\$190,290,132		
Total Effect	6,948.7	\$350,273,408	\$469,890,179	\$573,781,077		

For the Northwest Arkansas region, the output multiplier for economic activities associated with the annual business expenditures was 1.51 in the 2014 fiscal year. This means for every dollar of business expenditures at the University, the total economic impact generated within the Northwest Arkansas region was \$1.51. In 2014, these annual business expenditures generated an economic impact of \$522.2 million in Northwest Arkansas. These activities directly supported 4,722.2 jobs in Northwest Arkansas and a total of 6,178.7 jobs through indirect and induced effects. Total labor income generated in Northwest Arkansas by the annual business expenditures was \$338.0 million in 2014.

Table 5: 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	4,722.2	\$280,653,980	\$330,134,168	\$346,417,244	
Indirect Effect	41.9	\$2,028,075	\$3,280,643	\$5,445,827	
Induced Effect	1,414.7	\$55,358,636	\$106,012,885	\$170,367,508	
Total Effect	6,178.7	\$338,040,691	\$439,427,696	\$522,230,578	

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 1.60 in the 2014 fiscal year. This means for every dollar of construction expenditures at the University, the total economic impact generated within the state was \$1.60. In 2014, one-time construction activities generated an economic impact of \$235.5 million in Arkansas. The construction activities directly supported 1,027.9 jobs in Arkansas and a total of 1,678.3 jobs through indirect and induced effects. Total labor income generated in Arkansas by the construction activity was \$76.5 million in 2014.

Table 6: University of Arkansas Construction Economic Impact in Arkansas

University of Arkansas Construction Economic Impact in Arkansas					
Impact Type	mpact Type Employment		Total Value	Output	
		Income	Added		
Direct Effect	rect Effect 1,027.9		\$55,099,883	\$147,435,422	
Indirect Effect	direct Effect 305.0		\$25,472,850	\$46,638,351	
Induced Effect	345.4	\$13,204,445	\$25,497,304	\$41,463,794	
Total Effect	1,678.3	\$76,522,583	\$106,070,038	\$235,537,566	

For the Northwest Arkansas region, the output multiplier for economic activities associated with the one-time construction activities was 1.61 in the 2014 fiscal year. This means for every dollar of construction expenditures at the University, the total economic impact generated within the Northwest Arkansas region was \$1.61. In 2014, one-time construction activities generated an economic impact of \$23.8 million in Arkansas. The construction activities directly supported 100.8 jobs in Northwest Arkansas and a total of 169.5 jobs through indirect and induced effects. Total labor income generated in Northwest Arkansas by the construction activity was \$11.1 million in 2014.

Table 7: University of Arkansas Construction Economic Impact in Northwest Arkansas

University of Arkansas Construction Economic Impact in Northwest Arkansas						
Impact Type	Employment	Labor	Total Value	Output		
		Income	Added			
Direct Effect	100.8	\$5,053,636	\$5,742,039	\$14,786,034		
Indirect Effect	34.3	\$1,828,980	\$2,776,141	\$4,828,329		
Induced Effect 34.4		\$1,345,149	\$2,575,078	\$4,138,960		
Total Effect	169.5	\$8,227,766	\$11,093,259	\$23,753,322		

Direct Tax Payments

As discussed earlier, the University of Arkansas has significant impact on the tax revenues paid to state and local governments indirectly through various University constituents. Under Arkansas law, the University does not pay taxes on any property that is used for academic purposes. In the fiscal year 2014, tax-exempt property amounted to 5,511.60 acres while non-exempt property amounted to 167.09 acres. The value of the non-exempt land was \$22,136,707 while the value of tax-exempt land was \$25,540,057 (this estimate reflects value of the land when it was purchased, as current value is unavailable). For the non-exempt land, the University paid \$255,822 in property taxes for the 2014 fiscal year 12.

Table 8: University of Arkansas Property Acreage and Value

University of Arkansas Property Acreage and Value*					
Unit	Tax-exempt Acreage	Non-Exempt Acreage	Cost of Tax- Exempt Acreage	Cost of Non- Exempt Acreage	
University of Arkansas, Fayetteville	572.64	167.09	\$25,021,359	\$22,136,707	
University of Arkansas Experiment Farm	749.94		\$233,901		
University of Arkansas Miscellaneous Lands	4189.02		\$284,798.07		
Total	5,67	5,678.69 \$47,676,764		76,764	
Total Property Taxes Paid	id \$255,822				

^{*}Values of tax-exempt land reflect cost at the time of acquisition

Source: University of Arkansas Controller's Office

In the fiscal year 2014, the University paid nearly \$5.0 million in sales and use taxes to various state and local governments. The largest payment was made to the state of Arkansas, amounting to \$4.4 million while Washington County and the city of Fayetteville received \$226,246 and \$375,758, respectively. These payments were made for various services and items that the University purchased for its operations¹³. A list of these items purchased was shown in Table 2.

Table 9: University of Arkansas Sales and Use Tax Payments

University of Arkansas Sales and Use Tax Payments 2008-2009		
State of Arkansas	\$4,379,449	
Washington County	\$226,246	
City of Fayetteville	\$375,758	
Total	\$4,981,453	

Source: University of Arkansas Controller's Office

Impact of Student Spending

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. 2,600 students were sent surveys as part of a sample that was drawn from 26,237 students and constituted in proportion to various factors which included student academic level, residency, and gender. The survey was conducted online by researchers from the Center for Business and Economic Research and staff from the Office of the Student Affairs in the fall of 2014. 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 more steady income than most undergraduate students. Analysis of the survey results showed that of 26,237 students enrolled at the University of Arkansas, 26,067 lived in Northwest Arkansas.

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 spending money on each category. In order of magnitude, the largest monthly expenses of students were rent, restaurants and bars, and motor vehicle related purchases.

Table 10: Average Monthly Spending per Student

Average Student Spending per Month								
Category	Freshmen		Other Undergrads		Graduate Students		Law Students	
	Percent	Average	Percent	Average	Percent	Average	Percent	Average
	Use	Amount	Use	Amount	Use	Amount	Use	Amount
Rent for a NON-university owned	7.5%	\$ 530	57.7%	\$ 518	75.8%	\$ 537	80.0%	\$ 494
property								
Mortgage		\$ -	6.0%	\$ 607	10.5%	\$ 1,154	0.0%	\$ -
Cell phone (479 area code)	13.1%	\$ 74	17.4%	\$ 96	26.3%	\$ 105	0.0%	\$ -
Groceries	56.1%	\$ 116	74.6%	\$ 156	89.5%	\$ 280	80.0%	\$ 119
Restaurants and bars	60.7%	\$ 73	76.6%	\$ 98	88.4%	\$ 136	80.0%	\$ 175
Entertainment, recreation, and	53.3%	\$ 178	65.7%	\$ 109	72.6%	\$ 76	80.0%	\$ 83
sports (fraternity/sorority social								
or parlor dues)								
Clothing	49.5%	\$ 69	57.7%	\$ 74	72.6%	\$ 72	80.0%	\$ 43
Books (enter amount per	57.9%	\$ 490	73.6%	\$ 458	75.8%	\$ 241	80.0%	\$ 713
semester)*								
Laundry/dry cleaning	14.0%	\$ 26	21.9%	\$ 26	31.6%	\$ 26	60.0%	\$ 33
Medical and dental out of pocket	15.9%	\$ 158	24.4%	\$ 104	41.1%	\$ 249	40.0%	\$ 113
Pharmacy (prescription and non-	26.2%	\$ 30	40.8%	\$ 42	47.4%	\$ 54	40.0%	\$ 43
prescription)								
General merchandise	41.1%	\$ 65	46.8%	\$ 68	60.0%	\$ 95	80.0%	\$ 115
Motor vehicle purchases, repair,	44.9%	\$ 112	66.2%	\$ 129	80.0%	\$ 157	80.0%	\$ 125
fuel								
Local transit	3.7%	\$ 38	5.5%	\$ 45	3.2%	\$ 70	20.0%	\$ 50
Other personal services (barber	34.6%	\$ 51	41.3%	\$ 57	50.5%	\$ 61	80.0%	\$ 50
shop, beauty shop, fitness)								
Water and Sewer	9.3%	\$ 61	41.8%	\$ 48	66.3%	\$ 49	40.0%	\$ 48
Electric	9.3%	\$ 83	45.8%	\$ 67	83.2%	\$ 78	60.0%	\$ 92
Internet	9.3%	\$ 61	39.8%	\$ 49	80.0%	\$ 56	60.0%	\$ 79
Natural gas and/or heating oil	6.5%	\$ 38	18.4%	\$ 50	42.1%	\$ 52	40.0%	\$ 58
Cable television	1.9%	\$ 45	25.4%	\$ 63	26.3%	\$ 81	40.0%	\$ 85
Telephone	0.0%	\$ -	3.5%	\$ 68	5.3%	\$ 38	0.0%	\$ -
Other	0.9%	\$ 90	2.0%	\$ 62	1.1%	\$ 9	0.0%	\$ -

*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 \$307.4 million in Northwest Arkansas in 2014. Student spending on rent across all academic levels accounted for \$80.6 million and was 26.2 percent of the total spending. Spending on groceries accounted for nearly \$39.0 million or 12.7 percent of the total spending, while spending on fuel and other expenses related to motor fuels accounted for 8.5 percent of the total spending. In 2014, sophomores, juniors, and seniors at the University of Arkansas spent \$190.4 million in the Northwest Arkansas economy, graduate students spent \$75.8 million, freshmen spent \$35.1 million and law students spent \$6.0 million.

Certain student expenditures such as spending on groceries, restaurants, entertainment, books and supplies, clothing, laundry, fuel and others are subject to the state sales tax. Students from the University of Arkansas spent \$161.5 million on items that are subject to the sales tax. Researchers from the Center estimate that students paid \$7.9 million in state sales taxes for these purchases. Using an average of 3.0 percent for local sales taxes, researchers also estimate these student purchases resulted in the collection of \$4.8 million by local governments.

Table 11: Estimated Student Spending

Uni	University of Arkansas Estimated Spending from Students				
Category	Freshmen	Other	Graduate	Law Students	All students
		Undergrads	Students		
Rent for a NON-university	\$2,831,583	\$56,691,866	\$19,235,270	\$1,796,460	\$80,555,179
owned property				,	
Mortgage	\$-	\$6,863,358	\$5,740,395	\$-	\$12,603,753
Cell phone (479 area code)	\$695,699	\$3,178,199	\$1,300,453	\$-	\$5,174,352
Groceries	\$4,668,737	\$22,047,518	\$11,848,298	\$432,060	\$38,996,613
Restaurants and bars	\$3,159,050	\$14,217,514	\$5,696,632	\$636,720	\$23,709,916
Entertainment, recreation, and sports (fraternity/sorority social or parlor dues)	\$6,782,567	\$13,587,720	\$2,618,312	\$300,168	\$23,288,767
Clothing	\$2,458,672	\$8,108,131	\$2,486,526	\$154,632	\$13,207,962
Books (enter amount per semester)	\$3,383,375	\$10,659,993	\$1,435,969	\$432,060	\$15,911,397
Laundry/dry cleaning	\$257,963	\$1,092,712	\$383,422	\$90,960	\$1,825,058
Medical and dental out of pocket	\$1,793,715	\$4,801,711	\$4,832,813	\$204,660	\$11,632,898
Pharmacy (prescription and non-prescription)	\$570,059	\$3,281,908	\$1,216,906	\$77,316	\$5,146,189
General merchandise	\$1,898,638	\$6,057,528	\$2,685,448	\$418,416	\$11,060,030
Motor vehicle purchases, repair, fuel	\$3,589,434	\$16,163,466	\$5,932,852	\$454,800	\$26,140,552
Local transit	\$101,581	\$461,975	\$104,434	\$45,480	\$713,470
Other personal services (barber shop, beauty shop, fitness)	\$1,250,388	\$4,434,959	\$1,444,672	\$181,920	\$7,311,939
Water and Sewer	\$409,667	\$3,809,879	\$1,532,695	\$86,412	\$5,838,653
Electric	\$556,693	\$5,806,742	\$3,078,320	\$250,140	\$9,691,895
Internet	\$404,989	\$3,660,916	\$2,112,055	\$216,485	\$6,394,445
Natural gas and/or heating oil	\$179,772	\$1,743,248	\$1,026,935	\$104,604	\$3,054,560
Cable television	\$60,147	\$3,044,320	\$1,010,027	\$154,632	\$4,269,126
Telephone	\$-	\$447,833	\$94,488	\$-	\$542,321
Other	\$60,147	\$234,759	\$4,476	\$-	\$299,381
Total	\$35,112,878	\$190,396,254	\$75,821,398	\$6,037,925	\$307,368,455

Source: Center for Business and Economic Research Calculations

Impact of New non-University Student Housing

The student body at the University of Arkansas grew a remarkable 36.7 percent from 19,194 in 2008 to 26,237 in 2014. 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 2009 are worth nearly \$100 million and added at least 1.6 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.

New non-University Student Housing					
Name	Year built	Square Feet	Property Value		
The Cardinal	2014	388,400*	\$25,134,958*		
Sterling Frisco	2013	467,896	\$19,618,500		
University House	2013	309,580	\$19,306,750		
The Grove	2012	202,600	\$15,713,750		
Hill Place	2009	315,920	\$18,539,850		
Total		1,684,396	\$98,313,808		

Table 12: New non-University Student Housing

Source: Center for Business and Economic Research Calculations and Washington County Assessor

Indirect Tax Payments

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 table below shows the estimated real estate and personal property taxes paid in Washington County 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 5.2 percent, or 1,357 students, own houses in Northwest Arkansas. These 1,357 students paid an estimated \$2.1 million in real estate taxes (or 0.7 percent of total real estate tax collections) to Benton and Washington counties in Arkansas. Students in Washington County paid \$1.3 million in real estate taxes which represented 1.0 percent of the total county real estate tax collections. Additionally, similar estimates from the survey show that students at the University of Arkansas own 12,603 vehicles that are registered in Benton and Washington counties in Northwest Arkansas. The personal property taxes associated with these vehicles amounted to \$1.2 million across the two counties or 1.8 percent of the total personal property taxes collected. 78.5 percent of the cars registered in Northwest Arkansas were

^{*}Estimated from building permit value

registered in Washington County. These 9,890 cars registered in Washington County paid nearly \$1.0 million in personal property taxes or 3.7 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^{14,15}.

Table 13: Estimated Property Taxes Paid in Washington County

University of Arkansas Student Property Taxes in Washington County				
Tax Category	Property Taxes Paid in Washington County	% of Total Taxes Collected in Washington County		
Houses of Students	\$1,245,852	1.0%		
Vehicles of Students	\$949,491	3.7%		

Source: Center for Business and Economic Research Estimates

Table 14: Estimated Property Taxes Paid in Northwest Arkansas

University of Arkansas Student Property Taxes in Northwest Arkansas				
Tax Category	Property Taxes Paid in Northwest	% of Total Taxes Collected in Northwest		
Tax Category	Arkansas	Arkansas		
Houses of Students	\$2,072,966	0.7%		
Vehicles of Students	\$1,215,226	1.8%		

Source: Center for Business and Economic Research Estimates

Impact of Arkansas Research and Technology Park and Technology Transfer

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.

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.

The economic impact of the Arkansas Research and Technology Park between 2003 and 2014 was calculated by researchers at the Center for Business and Economic Research in October 2014¹⁶. 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 and the yearly construction expenditures made for the ARTP. The business expenditures of the ARTP tenants were aggregated and subtotaled based on industry descriptions provided by the NAICS code. For the one time impacts, researchers only used expenditures related directly to the construction in the analysis. Values of construction spending and 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. The results of the economic impact study of ARTP are presented here.

ARTP Economic Impact in 2013-14 Academic Year

In the 2013-14 academic year, the tenant activities of the ARTP generated an economic impact for the state of Arkansas of \$54.8 million, while construction activities generated \$1.3 million. The tenant activities had an employment impact of 385.1 jobs with an associated labor impact of \$22.2 million while the construction activities supported 9.0 jobs with a labor income of \$413,100 in the state. 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 nearly \$38.0 million. The tenant activities supported 260.2 jobs with a labor income of \$15.2 million in the region. Additionally, the construction activities generated \$1.3 million in the Northwest Arkansas economy and supported 8.9 jobs with a labor income of \$441,253.

Table 15: Overall Economic Impact of ARTP (2013-14)

Economic of Impact of ARTP		
Direct Tenant Expenditures	\$32,055,100	
Direct Tenant Employment	196	
Tenant Output Impacts	\$54,757,074	
Tenant Employment Impact	385.1	
Tenant Labor Income Impacts	\$22,232,649	
Direct Construction Expenditures	\$779,645	
Construction Output Impacts	\$1,280,721	
Construction Employment Impact	9.0	
Construction Labor Income Impacts	\$413,100	

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. From 1987

through fiscal year 2013, the University of Arkansas System-Division of Agriculture and the University of Arkansas-Fayetteville received 761 invention disclosures. Forty-four of these disclosures were received in fiscal year 2013. In addition, since 1987, 215 US patents issued from 665 US patent applications, selected from these disclosures. In fiscal year 2013, \$245,731.88 in royalties were distributed to inventors living in Arkansas and \$925,153 in revenues resulting from licensing or options for inventions were collected¹⁷.

Impact of Visitor Spending

To accurately portray some of the indirect spending associated with the University of Arkansas, researchers from the Center for Business and Economic Research examined expenditures of visitors affiliated with the University of Arkansas. The University of Arkansas attracts many visitors to Northwest Arkansas through four major categories. The categories are: visitors to various athletic events, visitors of students, visitors to the Office of Admissions, and visitors to the various camps and conferences¹⁸ at the University of Arkansas. Visitors included in the economic impact estimation come from outside Northwest Arkansas, as spending from local residents does not add to the total expenditures in the area. Spending by local visitors typically replaces other spending in the local area.

Local Impact of Visitors to Students of the University of Arkansas

Students at the University of Arkansas were surveyed during the fall of 2014 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 and their length of stay in a Northwest Arkansas hotel or motel. 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 \$129 per night, which is the per diem expenditure allowed for the region¹⁹. Visitors to students at the University of Arkansas spent \$5.1 million in the local economy. These visitors paid \$306,481 in state sales taxes and \$153,241 in local sales taxes.

Table 16: Faculty, Staff, and Student Visitor Spending

University of Arkansas Student Visitor Spending					
	Freshmen	Other	Graduate	Law	All students
		Undergrads	Students	Students	
Students with visitors	3,787	11,157	2,901	303	18,148
Hotel Room Nights	6,015	30,405	3,025	152	39,597
Total Visitor Expenditures	\$775,895	\$3,922,309	\$390,260	\$19,556	\$5,108,020

Source: Center for Business and Economic Research Survey Data

Local Impact of 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 12,851 visitors to campus in the 2013-14 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 does not include visitors that did not use the Office of Admissions official tour for a visit to the University²⁰.

When estimating overnight stays, researchers from the Center used a conservative assumption that only visitors coming from distances greater than 300 miles would spend the night in Northwest Arkansas. Using the per diem expenditure of \$129, researchers estimate that the 1,371 overnight visitors to the Office of Admissions spent approximately \$176,859 in the local economy. The 11,480 visitors coming from distances less than 300 miles were assumed to have only spent money on lunch and incidentals valued at \$16²¹. These visitors spent a total of \$183,672 in the local economy. Overall, visitors to the Office of Admissions spent \$360,531 in the local economy and paid state sales taxes of \$21,632 and local sales taxes of \$10,816 (using a 3.0 percent average local sales tax rate).

Table 17: Visitor Information from the Office of Admissions

Visitor Info	Visitor Information from the Office of Admissions				
Distance from University of Arkansas	Number of Visitors	Spending	Total Spending		
50 or fewer miles	2,397	\$16	\$38,352		
51 to 150 miles	2,831	\$16	\$45,288		
151 to 300 miles	6,252	\$16	\$100,032		
301 or more miles	1,371	\$129	\$176,859		
Total	12,851		\$360,531		

Source: University of Arkansas Office of Admission and Center for Business and Economic Research

Local Impact of Spending by Conference Attendees

Another example of 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 such as 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 payments to the University of Arkansas, camp and conference attendees may spend additional money off campus in the local economy as part of their travel. Researchers from the Center for Business and Economic Research do not have reasonable estimates of such spending off campus and therefore their impact on the local economy is unknown.

Data gathered from University Housing²² lists the number of participants by camp or conference. In all, during the 2013-14 academic year, 23,060 participants visited the University of Arkansas for various camps and conferences. If these attendees spent even \$10 in the local economy during their stay, their total impact would be \$230,060.

In addition to the visitors who utilized University Housing, an additional 6,500 visitors attended events at the University of Arkansas that processed registrations through the University Conference Services. Staff at University Conference Services estimate that 10 percent of these visitors were from outside the Northwest Arkansas region²³.

Table 18: Visitors to Conferences and Camps Hosted by University Housing

Visitors to Conferences and Camps Hosted by University Housing		
Conferences	Number of Attendees	
2014 Geology Field Camp		
2014 Bluhm Summer Scholars	80	
2014 Summer Immersion Meals	80	
2014 Summer Immersion Housing	80	
2014 NSF Career Workshop	100	
2014 Artosphere Festival Orchestra	82	
2014 Upward Bound Bridge 1	20	
2014 Upward Bound Bridge 2	20	
2014 Upward Bound Bridge Math Science	20	
2014 Walmart International - Pomfret	800	
2014 Walmart International - Yocum	500	
2014 Walmart US Gibson	193	
2014 Walmart US Founders	212	
2014 Walmart Sams Hotz	414	
2014 Walmart US Glad-Rip	101	
2014 Walmart US Gregson	203	
2014 Walmart US Holcombe	141	
2014 Walmart US Humphreys	430	
2014 Walmart Sams Northwest Quad	0	
2014 Walmart US Phi Gamma Delta	64	
2014 Walmart US Maple Hill East	348	
2014 Walmart US Maple Hill South	303	
2014 Walmart US Maple Hill West	376	
2014 Walmart US Reid	457	
2014 Walmart US Sigma Nu	53	
2014 Walmart US Yocum	53	
2014 Walmart LABOR	53	
2014 Business Leadership Academy	22	
2014 Discoverlaw.org PLUS Program		
2014 ECAP	22	
2014 Razorback Golf Camp - Women's	38	
2014 Upward Bound - Southern University	140	
2014 UCA Cheer 1	135	

2014 Razorback Softball	250
2014 M-SEA	37
2014 Razorback Golf Camp - Men's	29
2014 YALLI	25
2014 Razorback Men's Basketball - Overnight	150
2014 Razorback Football Camp	350
2014 Upward Bound Summer Academy	140
2014 Upward Bound Summer Academy	140
2014 Upward Bound Summer Academy	140
2014 George N. Parks Drum Major Academy	86
2014 Razorback Men's Basketball - Team	112
2014 Arkansas Gymnastics Camp	254
2014 Technology Awareness Program	47
2014 ACT Academy I	125
2014 Kauffman Scholars, Inc. I	31
2014 Science and Engineering in the Elementary Classroom	31
2014 College Ready 01	31
2014 College Ready 02	77
2014 Livestock Judging Camp	140
2014 National Golden Age Games	850
2014 BSMP	42
2014 College Ready 03	80
2014 TTP	35
2014 ROCK Camp Adventure 1	32
2014 Summer Music Camp (Jr. High)	744
2014 Summer Music Camp (Jr. High)	744
2014 Summer Music Camp (Jr. High)	744
2014 Summer Music Camp (Jr. High)	744
2014 KIPP	31
2014 College Ready 05 & 06	77
2014 Arkansas Volleyball All Skills	232
2014 Poultry Science Youth Conference	28
2014 Arkansas Volleyball Team Camp 1	212
2014 Nebraska Methodist College UB	46
2014 ROCK Camp Adventure 2	32
2014 Marching Auxiliaries	744
2014 Summer Music Camp (Sr. High)	744
2014 Summer Music Camp (Sr. High)	744
2014 Summer Music Camp (Sr. High)	744
2014 Summer Music Camp (Sr. High)	744
2014 ACT Academy II	125

2014 UCA Cheer 2	135
2014 Volleyball Commuter Meals	292
2014 Arkansas Athletes Outreach (AAO)	100
2014 ROCK Camp Service	32
2014 Native Youth in Agriculture Summit	75
2014 APSI	150
2014 4-H O'Rama youth/volunteers	610
2014 4-H O'Rama youth/volunteers	610
2014 4-H O'Rama youth/volunteers	610
2014 4-H O'Rama faculty/staff	610
2014 4-H O'Rama faculty/staff	610
2014 4-H O'Rama faculty/staff	610
2014 4-H O'Rama	610
2014 4-H O'Rama youth/volunteers	610
2014 4-H O'Rama faculty/staff	610
2014 Colby Hale Soccer Camp	100
2014 Ozark Mountain Brawl	32
2014 College Ready 08	32
2014 Engineering Summer Academy	92
2014 Engineering Summer Academy	92
2014 Engineering Summer Academy	92
2014 Kauffman Group II	31
2014 Waseda Athletic Training	31
2014 College Ready 09	31
Total	23,060

Local Impact of Spending of 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 877,000 fans attended home baseball, basketball and football games during the 2013-14 season and about 381,000 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 2013-14 academic year. 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 in the preceding 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 in the 2011-12 academic year.

Instead of carrying out the entire study again, researchers updated only the spending associated with the fans attending the football games, which made up the largest component of fan spending in the 2011-12 study. As such, 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 2014. 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 in the 2011-12 academic year. 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. Using these survey responses for baseball and basketball from the 2011-12 academic year and attendance figures from the 2013-14 academic year, researchers were able to provide an update to the spending patterns of visitors at baseball and basketball games. Football fan spending was extrapolated from the fall 2014 survey and attendance. The extrapolated data on visitor spending are presented separately for each sport surveyed.

Baseball

Using the information from the surveys conducted in the 2011-12 academic year, researchers from the Center were able to provide estimates of the number of visitors at home baseball games that came from outside Northwest Arkansas in the 2013-14 academic year. On average, 16.1 percent of attendees came from outside Northwest Arkansas. In all, of the 264,141 attendees at all home baseball games during the 2013-14 season, 42,527 came from outside Northwest Arkansas. The survey conducted in the 2011-12 academic year also allowed researchers to estimate an average spending of \$66.11 associated with each visitor to baseball games. When these data are extrapolated to reflect the spending patterns of the 42,527 visitors from outside Northwest Arkansas, the visitors spent \$2,811,440 in the Northwest Arkansas economy or an average of \$78,096 per game.

Basketball

The surveys conducted in the 2011-12 academic year allow researchers from the Center to provide estimates of the number of visitors at home basketball games that came from outside Northwest Arkansas in the 2013-14 academic year. On average, 29.6 percent of attendees came from outside Northwest Arkansas. In all, of the 269,838 attendees at all home basketball games during the 2013-14 season, 79,872 came from outside Northwest Arkansas. The survey conducted in the 2011-12 academic year also allows researchers to estimate an average spending of \$43.49 associated with each visitor to basketball games. When these data are extrapolated to reflect the spending patterns of the 79,872 visitors from outside Northwest Arkansas, the visitors spent \$3,473,635 in the Northwest Arkansas economy or an average of \$182,823 per game.

Football

The surveys conducted in the 2014-15 academic year allow researchers from the Center to provide estimates of the number of visitors at home football games that came from outside Northwest Arkansas in the 2014 academic year. On average, 74.5 percent of attendees came from outside Northwest Arkansas. In all, of the 399,124 attendees at all home football games during the 2014 season, 301,339 came from outside Northwest Arkansas. The survey conducted in the 2014-15 academic year also allows researchers to estimate an average spending of \$79.91 associated with visitors to football games. When these data are extrapolated to reflect the spending patterns of 301,339 visitors from outside Northwest Arkansas, the visitors spent \$24,079,969 in the Northwest Arkansas economy or an average of \$4.0 million per game.

Overall Spending of Athletic Event Visitors

Table 19: Overall Spending of Athletic Event Visitors

Overall Spending of Athletic Event Visitors						
Event Number of Visitors Average Visitor Spending Total Visitor Spending						
Baseball (2013-14)	42,527	\$66.11	\$2,811,440			
Basketball (2013-14)	79,872	\$43.49	\$3,473,635			
Football (2014-15)	301,339	\$79.91	\$24,079,969			
Total	423,738	-	\$30,365,044			

In total, visitors to home baseball, basketball and football games spent \$30.4 million in the Northwest Arkansas economy. This spending generated state sales taxes worth \$1.8 million and local sales taxes worth \$910,951 (assuming an average Northwest Arkansas local sales tax of 3.0%).

Alumni Impacts

The University of Arkansas positively impacts the state of Arkansas by serving as the premier source of higher education. This 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, 227 baccalaureate, master's, doctorate, and certificate programs are administered through the 9 colleges at the University of Arkansas. 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 20: University of Arkansas: Academic Departments and Degrees Offered

University of Arkansas: Academic Departments and Degrees Offered						
College	Departments	Baccalaureate Degrees	Master's Degrees/ LLM	Doctorate /JD	Certificates/ Specialty Degrees	
Dale Bumpers College of	11	12	11	6	1	
Agriculture, Food and Life						
Sciences						
Fay Jones School of	4	5	N/A	N/A	N/A	
Architecture						
J. William Fulbright College	21	37	26	11	3	
of Arts and Sciences						
Sam M. Walton College of	9	10	4	2	3	
Business						
College of Education and	6	11	20	21	3	
Health Professions						
College of Engineering	9	10	12	2		
Graduate School	1		5	5	4	
School of Law	1		1	1	1	

Source: University of Arkansas Office of Institutional Research

Since its founding in 1871, the University of Arkansas has awarded a total of 178,396 degrees²⁴. Of these, 118,620 are bachelor's degrees, 44,433 are master's degrees, and 6,020 are doctorates. Enrollment

counts during the same period total up to more than 916,211²⁵ (the figure does not represent unique students). Figure 1 depicts the enrollment trends in the last ten years (2004-2014). During this period, annual enrollment has gone up a remarkable 61.5 percent with an average annual increase in enrollment of 5.0 percent. In the same time period, there was an increase of 51.9 percent in the number of degrees awarded with an average annual increase of 4.3 percent in degrees awarded (Figure 2)²⁶.

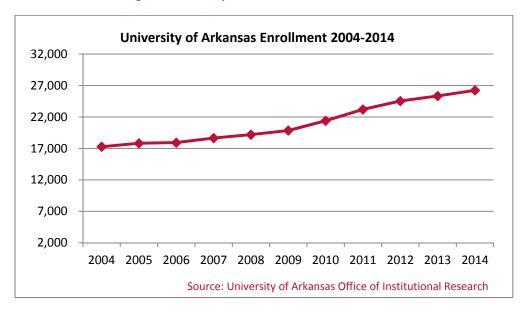
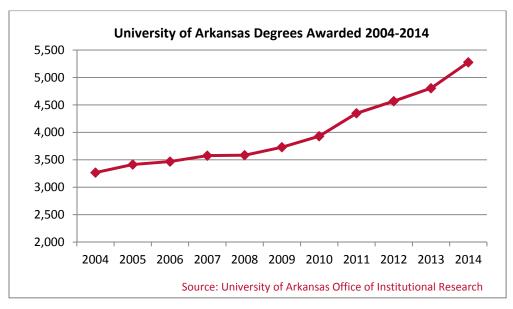


Figure 1: University of Arkansas Enrollment 2004-2014





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 as of December 2014. These University of Arkansas alumni have

had a tremendous impact on the state and its 75 counties. There are a total of 68,622 alumni living in Arkansas. As the total population of Arkansas was most recently estimated at 2,949,238 by the U.S. Census Bureau, this implies that 2.0 percent of the state's residents are University of Arkansas alumni. Of those alumni, 21,579 have graduate (master's or PhD) or professional degrees, 46,319 have bachelor's degrees, and 724 have associate's degrees. Washington County, home to the University of Arkansas, has the greatest number of resident graduates, with 6,447 alumni who have graduate or professional degrees, 13,583 alumni who have bachelor's degrees, and 311 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 3,543 alumni who have graduate or professional degrees, 8,690 alumni who have bachelor's degrees, and 51 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 2,787 alumni who have graduate or professional degrees, 7,108 alumni with bachelor's degrees, and 174 alumni with associate's degrees²⁷.

Table 21: University of Arkansas Alumni Currently Living in Arkansas

University of Arkansas Alumni Currently Living in Arkansas						
Counties	Associate's Degrees	Baccalaureate Degrees	Graduate or Professional Degrees			
Benton	174	7,108	2,787			
Craighead	7	542	295			
Faulkner	12	1,089	513			
Garland	12	1,219	473			
Jefferson	9	478	504			
Pulaski	51	8,690	3,543			
Saline	16	1,073	405			
Sebastian	17	2,514	1,343			
Washington	311	13,583	6,447			
White	1	404	224			
Other 65 Counties	114	9,619	5,045			
Arkansas Total	724	46,319	21,579			
Total Resident Alumni in Arkansas		68,622				

Source: Arkansas Alumni Association

Increased Earnings

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 employers²⁸. 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 2013 American Community Survey from the U. S. Census Bureau. Earnings are reported in nominal 2013 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 \$19,966 for individuals with below high school education to \$25,245 for individuals with a high school diploma. Median earnings continue growing to \$29,167 when a person receives an associate's degree, climb to \$43,758 for a bachelor's degree, and then reach a peak with \$56,121 for a graduate or professional degree. Thus, for the median person who made the decision and obtained higher education, earnings almost double. Moreover, the difference between earnings of a high school graduate and a college graduate has been continuously increasing over time²⁹.

Table 22: Arkansas Median Earnings by Educational Attainment

	Arkansas Median Earnings by Educational Attainment							
Counties	Below High School	High School	Associate's Degree	Bachelor's Degree	Graduate or Professional Degree			
Benton	\$21,932	\$27,012	\$32,742	\$54,980	\$64,328			
Craighead	\$18,561	\$25,438	\$27,450	\$36,972	\$56,228			
Faulkner	\$16,583	\$35,212	\$30,771	\$45,124	\$56,989			
Garland	\$16,324	\$25,740	\$25,376	\$48,353	\$56,640			
Jefferson	\$15,858	\$25,758	\$29,391	\$44,570	\$50,045			
Pulaski	\$18,398	\$24,950	\$31,152	\$44,792	\$60,752			
Saline	\$19,813	\$31,044	\$35,063	\$47,422	\$60,843			
Sebastian	\$20,348	\$24,360	\$29,563	\$48,909	\$61,648			
Washington	\$21,133	\$25,966	\$30,404	\$46,802	\$57,272			
White	\$20,988	\$26,920	\$30,889	\$43,740	\$54,296			
Arkansas	\$19,966	\$25,245	\$29,167	\$43,758	\$56,121			

Source: U.S. Census Bureau, 2013 American Community Survey

The wage differential in Pulaski County, the state's most populous county, is significant as education level grows, with the median wage increasing by \$19,842 from a high school diploma to a bachelor's degree, and by \$15,960 from a bachelor's degree to graduate or professional degree. In Washington County, home to the University of Arkansas, median earnings increase by \$20,836 if a person with a high school diploma completes a bachelor's degree and increase by an additional \$10,470 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. For the Arkansas population, the percent of individuals holding a bachelor's degree or higher has been increasing over time, and was 20.7 percent in 2013. 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 27.9 percent, compared to 20.7 percent for the state as a whole. Similarly the percentage of the population 25 or older with a graduate or professional degrees is higher in Northwest Arkansas as well, with 10.3 percent in Northwest Arkansas and 7.2 percent in Arkansas in

2013. This is good evidence that many highly qualified workers like graduates of the University of Arkansas tend to concentrate in the Northwest Arkansas area³⁰.

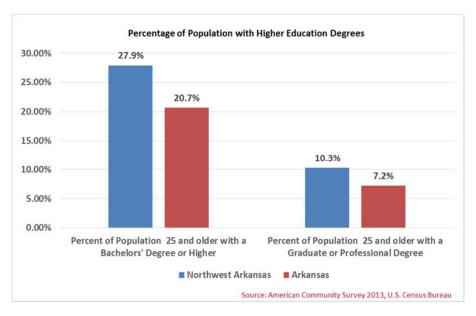


Figure 3: Percentage of Population with Higher Education Degrees

Tax and Transfer Effects

This section shows the particular 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 2013 American Community Survey³¹. In order to approximate the number of employed alumni, the initial alumni data were multiplied by two ratios, the first to account for alumni over 64, and the second to account for alumni who are not employed.

As shown in the following tables, University of Arkansas alumni earned estimated annual wages totaling \$2.3 billion, which is 9.0 percent of the total state wages of \$26.1 billion. Of these wages, \$1.1 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 2.0 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 \$855.5 million or 15.6 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 \$1.5 billion or 18.3 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 \$719.8 million, or 32.7 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 \$262.3 million, which was 41.5 percent of the total wages in this category. For bachelor's degree wages in Washington County, University of Arkansas alumni earned \$451.7 million, or a tremendous 63.4 percent of the total. Pulaski County had the second greatest dollar value of University of Arkansas alumni wages with a total of \$419.8 million earned. Out of that total, \$149.0 million was earned by alumni with a graduate or professional degree, and \$269.4 million was earned by alumni with a bachelor's degree. 13.6 percent of the wages earned in Benton County and 12.2 percent of the wages in Sebastian County were earned by University of Arkansas alumni.

Table 23: University of Arkansas Alumni Wage Estimates

	University of Arkansas Alumni Wage Estimates						
Counties	Associate's Degree	Baccalaureate Degree	Graduate or Professional Degrees	Total			
Benton	\$3,412,697	\$261,926,281	\$120,161,112	\$385,500,091			
Craighead	\$115,459	\$14,475,564	\$11,982,238	\$26,573,261			
Faulkner	\$246,462	\$36,251,174	\$21,567,262	\$58,064,897			
Garland	\$157,639	\$32,346,583	\$14,702,313	\$47,206,536			
Jefferson	\$125,347	\$13,711,051	\$16,232,725	\$30,069,123			
Pulaski	\$1,361,232	\$269,426,888	\$148,988,393	\$419,776,513			
Saline	\$350,686	\$35,552,412	\$17,216,907	\$53,120,005			
Sebastian	\$287,781	\$80,431,003	\$54,158,227	\$134,877,011			
Washington	\$5,808,389	\$451,689,797	\$262,349,468	\$719,847,653			
White	\$15,354	\$12,308,289	\$8,471,365	\$20,795,007			
Rest of Arkansas	\$1,634,511	\$270,639,142	\$179,659,560	\$451,933,213			
Arkansas	\$13,515,558	\$1,478,758,185	\$855,489,569	\$2,347,763,312			

Source: Center for Business and Economic Research Estimates

Table 24: University of Arkansas Alumni Income as a Percent of Total Income (2014)

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	
Benton	2.1%	24.2%	19.0%	13.6%	
Craighead	0.2%	5.1%	5.2%	3.0%	
Faulkner	0.2%	8.6%	7.3%	4.5%	
Garland	0.2%	12.9%	9.0%	6.3%	
Jefferson	0.4%	8.0%	17.0%	5.6%	
Pulaski	0.3%	16.3%	11.4%	9.5%	
Saline	0.3%	8.6%	7.4%	4.3%	
Sebastian	0.3%	22.2%	26.0%	12.2%	
Washington	5.3%	63.4%	41.5%	32.7%	
White	0.0%	7.1%	5.9%	3.2%	
Rest of Arkansas	0.2%	10.5%	11.6%	4.4%	
Arkansas	0.7%	18.3%	15.6%	9.0%	

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 68,622 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 nine identified counties³², and the median county tax rate for the other 65 counties³³, 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 most recent estimates from the U.S. Bureau of Labor Statistics Consumer Expenditure Survey)³⁴. The state sales tax dollars shown in the table below were calculated by multiplying the state sales and use tax rate of 6.0 percent by the appropriate proportion of employed alumni wages for the ten identified counties and the other 65 county grouping.

The tables show that estimated state sales taxes paid by University of Arkansas alumni totaled \$54.9 million. The total of county sales taxes paid by alumni was \$11.2 million. Washington County had the most taxes paid by alumni: \$16.8 million to the state and \$3.5 million to the county. Pulaski County was second in terms of sales tax collections from alumni with \$9.8 million paid to the state and \$1.6 million paid to the county. Benton County had the third highest impact as University of Arkansas alumni contributed \$9.0 million to the state and \$1.5 million to the county.

Table 25: Estimated Annual County Sales and Use Taxes Paid by Alumni

Estimated County Sales and Use Taxes Paid by University of Arkansas Alumni						
County	Sales and Use Tax Rate	Associate's Degree	Bachelor's Degree	Graduate or Professional Degree	Total	
Benton	1.00%	\$13,310	\$1,021,512	\$468,628	\$1,503,450	
Craighead	1.00%	\$450	\$56,455	\$46,731	\$103,636	
Faulkner	0.50%	\$481	\$70,690	\$42,056	\$113,227	
Garland	1.50%	\$922	\$189,228	\$86,009	\$276,158	
Jefferson	1.625%	\$794	\$86,894	\$102,875	\$190,563	
Pulaski	1.00%	\$5,309	\$1,050,765	\$581,055	\$1,637,128	
Sebastian	1.25%	\$1,403	\$392,101	\$264,021	\$657,525	
Washington	1.25%	\$28,316	\$2,201,988	\$1,278,954	\$3,509,257	
White	1.50%	\$90	\$72,003	\$49,557	\$121,651	
Other 65 Counties	1.75%	\$11,148	\$1,847,140	\$1,226,066	\$3,084,353	
Arkansas Total		\$62,222	\$6,988,776	\$4,145,952	\$11,196,949	

Source: Center for Business and Economic Research Estimates

Table 26: 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 Degree	Total			
Benton	\$79,857	\$6,129,075	\$2,811,770	\$9,020,702			
Craighead	\$2,702	\$338,728	\$280,384	\$621,814			
Faulkner	\$5,767	\$848,277	\$504,674	\$1,358,719			
Garland	\$3,689	\$756,910	\$344,034	\$1,104,633			
Jefferson	\$2,933	\$320,839	\$379,846	\$703,617			
Pulaski	\$31,853	\$6,304,589	\$3,486,328	\$9,822,770			
Saline	\$8,206	\$831,926	\$402,876	\$1,243,008			
Sebastian	\$6,734	\$1,882,085	\$1,267,303	\$3,156,122			
Washington	\$135,916	\$10,569,541	\$6,138,978	\$16,844,435			
White	\$359	\$288,014	\$198,230	\$486,603			
Other 65	\$38,220	\$6,333,052	\$4,203,654	\$10,574,926			
Counties							
Arkansas Total	\$316,237	\$34,603,037	\$20,018,076	\$54,937,350			

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 estimated³⁵. The following table shows that Arkansas alumni contributed \$114.8 million in income taxes to the state.

Table 27: Estimated State Income Taxes Paid by University of Arkansas Alumni

Estimated State Income Taxes Paid by University of Arkansas Alumni				
County Associate's Degree		Bachelor's Graduate or Professional Degree Degree		Total
Benton	\$131,754	\$13,254,289	\$6,419,227	\$19,805,271
Craighead	\$3,981 \$595,749	\$595,749	\$611,497	\$1,211,227
Faulkner	\$9,177	\$1,680,838	\$1,106,118	\$2,796,134
Garland \$5	\$5,107	\$1,550,847	\$752,341	\$2,308,295
Jefferson	\$4,534	\$631,705	\$790,378	\$1,426,616
Pulaski	\$51,067	\$12,445,174	\$7,813,847	\$20,310,087
Saline	\$14,036	\$1,689,156	\$903,410	\$2,606,601
Sebastian	\$10,448	\$3,876,406	\$2,854,200	\$6,741,055
Washington	\$214,689	\$21,325,989	\$13,479,354	\$35,020,032
White	\$573	\$561,488	\$426,608	\$988,668
Other 65	\$58,776	\$12,349,095	\$9,161,358	\$21,569,229
Counties				
Arkansas Total	\$504,142	\$69,960,736	\$44,318,338	\$114,783,216

Source: Center for Business and Economic Research Estimates

Other Community Impacts

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.

Outreach Effects

The University of Arkansas, through the Office of Sustainability and Academic Programs 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 educating students and citizens about environmental stewardship and sustainability, researching to develop knowledge and technologies that facilitate sustainability and improved environmental stewardship, committing to become a carbon neutral institution as soon as it is practical, committing to become a zero-waste institution as soon as it is practical and by serving as an exemplar of environmental stewardship for our community, Arkansas, and the world.

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.

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 educations, the Office of Academic Scholarships 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 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 table following, provide students with academic assistance, equip students to attend and succeed in college, and allow students to experience campus life.

Table 28: University of Arkansas Units Providing Support to Underrepresented Groups

University of Arkansas Units Providing Support to Underrepresented Groups			
Center for Children and Youth	http://coehp.uark.edu/9740.php/		
Center for Multicultural and Diversity Education	http://multicultural.uark.edu/		
College Access Initiative	http://multicultural.uark.edu/		
Office of Equal Opportunity and Compliance	http://oeoc.uark.edu/		
Student Support Services	http://sss.uark.edu/		
Talent Search	http://talentsearch.uark.edu/		
Upward Bound	http://ub.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 the various academic and outreach units at the University of Arkansas listed below.

Table 29: University of Arkansas Units Providing Education Outreach to Arkansas School Children

University of Arkansas Units Providing Education Outreach to Arkansas School Children		
Center for Advanced Spatial Technologies	http://cast.uark.edu/	
Arkansas Center for Space and Planetary Sciences	http://spacecenter.uark.edu/	
Center for Arkansas and Regional Studies	http://www.uark.edu/misc/carsinfo/	
Center for Semiconductor Physics in	https://vpr-norman.ou.edu/centers-institutes/list/center-semiconductor-physics-	
Nanostructures		
	nanostructures	
Bessie B. Moore Center for Economic Education	http://bmcee.uark.edu/	
Garrison Financial Institute	http://gfi.uark.edu/	
Information Technology Research Institute	http://itri.uark.edu/	
University of Arkansas ENACTUS	http://uofaenactus.wordpress.com/	
Arkansas Leadership Academy	http://www.arkansasleadershipacademy.org/	
Center for Mathematics and Science Education	http://cmase.uark.edu/	
National Office for Research, Measurement, and	http://normes.uark.edu/	
Evaluation Systems		
Office of International Students and Scholars	http://iss.uark.edu/	

At the University of Arkansas lifelong learning opportunities are provided through the University of Arkansas Global Campus, 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 30: University of Arkansas Units Engaged in Civic Participation and Community Involvement

University of Arkansas Units Engaged in Civic Pa		
Arkansas Archeological Survey	http://www.uark.edu/campus- resources/archinfo/	
Arkansas Center for Space and Planetary Sciences	http://spacecenter.uark.edu/	
Arkansas Cooperative Fish and Wildlife Research	http://www.coopunits.org/Arkansas/	
Unit	Tittp://www.coopumts.org/Arkansas/	
Arkansas Water Resources Center	http://www.uark.edu/depts/awrc/	
Arthropod Museum	http://www.uark.edu/ua/arthmuse/	
Center for Advanced Spatial Technologies	http://cast.uark.edu/	
Center for Business and Economic Research	http://cber.uark.edu/	
Center for Communication and Media Research	http://communication.uark.edu/	
Center for Social Research	-	
Center for the Utilization of Rehabilitation Resources for Education, Networking, Training, an		
Service		
Community and Family Institute	http://sociology.uark.edu/3550.php	
David and Barbara Pryor Center for Arkansas Oral	http://pryorcenter.uark.edu/	
and Visual History		
Diane D. Blair Center of Southern Politics and	http://blaircenter.uark.edu/	
Society	hus Hadaalad	
Fine Arts	http://art.uark.edu/	
International Center for the Study of Early Asian	http://www.uark.edu/ua/eeam/	
and Middle Eastern Music Garvan Woodland Gardens	http://www.garyangardans.org/	
	http://www.garvangardens.org/	
King Fahd Middle East Studies Program	http://mest.uark.edu/	
KUAF	http://kuaf.com/	
National Center for Agricultural Law Research	http://law.uark.edu/clinic/	
Office for Education Policy	http://www.officeforeducationpolicy.org/	
Rehabilitation Research and Training Center	http://rhab.uark.edu/	
School of Law Legal Clinic	http://law.uark.edu/clinic/	
Speech and Hearing Clinic	http://cdis.uark.edu/spcl.php	
Terrorism Research Center	http://trc.uark.edu/	
Tyson Center for Faith and Spirituality in the	http://tfsw.uark.edu/	
Workplace		
University of Arkansas ENACTUS	http://uofaenactus.wordpress.com/	
Walton Arts Center	http://www.waltonartscenter.org/	

Local Impact of University Charitable Activities

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 Counties³⁶.

Faculty and staff at the University not only support the local community through various community service activities, but also participate in different drives like the Salvation Army Angel Tree, Toys-for-Tots, etc. In addition, University of Arkansas faculty and staff contributed \$130,000 dollars to the United Way of Northwest Arkansas in the 2013-14 academic year³⁷. United Way of Northwest Arkansas serves over 59 different organizations in the Washington, Benton, Madison and McDonald Counties. In addition, according to a report issued by the Division of Volunteerism at the Arkansas Department of Human Services, 21,971 students, faculty, and staff volunteered for a total of 202,144 hours³⁸. According to independent sector.org, the value of one volunteer hour in Arkansas was \$18.93 in 2013, therefore researchers estimate the total value of University of Arkansas volunteerism at \$3,826,586³⁹.

Knowledge Transfer

For the Arkansas economy, both the supply and demand sides of economic development are equally important. Arkansas must have highly skilled, highly educated workers as well as the knowledge-based industries to employ them. Training, education, and technology are all critical, but the business climate of the state must encourage the immigration of high technology firms. The University of Arkansas facilitates the formation of new and expansion of existing businesses by providing technical assistance and directly participating in research and development efforts initiated by state entities.

Research expenditures at the University of Arkansas were a record \$123.2 million in 2012, up from \$120.0 million in 2011 and \$113.9 million in 2010. 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 31: University of Arkansas Units Transferring Specific Expertise and Knowledge

University of Arkansas Units Transferring Specific Expertise and Knowledge			
Arkansas Agricultural Experiment	http://aaes.uark.edu/		
Station			
Arkansas Forest Resources Center	http://www.afrc.uamont.edu/		
Arkansas High Performance Computing	http://hpc.uark.edu		
Center			
Arkansas Small Business and	http://asbtdc.org/		
Technology Development Center			
Center for Agriculture and Rural	http://www.uark.edu/ua/cars/		
Sustainability			
Center for Business and Economic	http://cber.uark.edu/		
Research			
Center for Computational Mechanics	http://compmech.cveg.uark.edu/		
Center for Excellence in Logistics and Distribution (CELDI)	http://www.celdi.ineg.uark.edu/		
Center for Food Safety	http://cfs.uark.edu/		
Center for Grid-Connected Advanced	http://grapes.uark.edu/		
Power Electronic Systems			
Center for Human Nutrition and	http://www.uark.edu/depts/ifse/CFHN.html		
Functional Foods			
Center for Information Security and	http://isr.csce.uark.edu/index.html		
Reliability			
Center for Innovation in Healthcare	http://cihl.uark.edu/		
Logistics			
Center for Protein Structure and	http://protein.uark.edu/		
Function Contag for Potalling Eventlenes	http://gra.uark.adu/		
Center for Retailing Excellence	http://cre.uark.edu/		
Center for Semiconductor Physics in Nano			
Center for Sensing Technology and Research	http://www.uark.edu/depts/anylchem/cstar/sens.html		
Center for Statistical Research and	http://math.uark.edu/4164.php		
Consulting			
Center of Excellence for Poultry Science	http://poultryscience.uark.edu/		
Chemical Hazards Research Center	http://www.cheg.uark.edu/ChemicalHazardsResearchCent		
	er.php		
Community Design Center	http://uacdc.uark.edu/		
High Density Electronics Center	http://www.hidec.uark.edu/		
Human Performance Laboratory	http://hpl.uark.edu/index.php/		
Information Technology Research Institute	http://itri.uark.edu/		
Institute of Food Science and	http://www.uark.edu/depts/ifse/		
Engineering	, ,,		
Institute for Nanoscience and	http://nano.uark.edu/		
Engineering			

Mack Blackwell Rural Transportation	http://mackblackwell.uark.edu/
Center	
Mass Spectrometry Facility	http://chemistry.uark.edu/4848.php
Mixed-Signal Computer-Aided Design	http://mixedsignal.eleg.uark.edu/
Lab	
National Center for Reliable Electric	http://ncrept.uark.edu/
Power Transmission	
Office for Studies on Aging	http://coehp.uark.edu/osa/
RiceCAP	http://www.uark.edu/ua/ricecap/
Rosen Alternative Pest Control Center	http://rosencenter.uark.edu/
Stable Isotope Laboratory	http://www.uark.edu/ua/isotope/
Supply Chain Management Research	http://scmr.uark.edu/
Center	

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.

Researchers from the Center for Business and Economic Research estimate that in 2014, activities associated with the University of Arkansas generated a total economic impact of \$1.2 billion in the state of Arkansas. This economic impact includes \$975.6 million in recurring annual economic impact and \$236.8 million in one-time construction impacts. The annual business operations of the University contributes \$573.8 million to the overall economic impact while student spending contributed \$307.4 million. The economic impact of the operations of tenants in the Arkansas Research and Technology Park adds \$54.8 million to the total.

In the Northwest Arkansas region, the University's economic impact is estimated at \$932.3 million in 2014. This economic impact includes \$907.2 million in recurring annual economic impact and \$25.0 million in one-time construction impacts. The annual business operations of the University contribute \$522.2 million to the overall economic impact while student spending contributes \$307.4 million. The economic impact of the operations of tenants in the Arkansas Research and Technology Park add nearly \$38.0 million to the total. Visitors to the University's athletic events, admissions office and students contribute \$35.8 million in spending in 2014 and the economic impact generated by University affiliated volunteers is \$3.8 million.

Table 32: 2014 University of Arkansas Economic Impact

2014 University of Arkansas Economic Impact			
	Arkansas	Northwest Arkansas	
University Operational Expenditures Economic Impact	\$573,781,077	\$522,230,578	
ARTP Operational Expenditure Economic Impact	\$54,757,074	\$37,972,980	
Spending by Students	\$307,368,455	\$307,368,455	
Spending by Visitors to Students	\$5,108,020	\$5,108,020	
Spending by Visitors to the Office of Admissions	\$360,531	\$360,531	
Spending by Visitors to Athletic Events	\$30,365,044	\$30,365,044	
University Volunteer Hours Economic Impact	\$3,826,586	\$3,826,587	
Subtotal of Annual Economic Impact	\$975,566,787	\$907,232,195	
University Construction Activity*	\$235,537,566	\$23,753,322	
ARTP Construction Activity*	\$1,280,721	\$1,272,244	
Grand Total Economic Impact	\$1,212,385,074	\$932,257,761	

^{*}One-time economic impacts

Direct expenditures from the University of \$534.4 million in the state of Arkansas generate an overall \$1.2 billion in economic activity, implying an output multiplier of 2.27. This means for every dollar of direct expenditures by University within Arkansas, the total economic impact generated is \$2.27. In the 2014 fiscal year, state appropriations of \$173.8 million were leveraged 6.98 times. Put another way, each dollar appropriated by the state of Arkansas to the University generate an economic impact of \$6.98.

For the 2014 fiscal year, sales taxes of nearly \$5.0 million were generated from University direct expenditures and remitted to state and local governments while \$255,822 were paid in property taxes. Student spending contributed \$7.9 million in sales taxes to the state of Arkansas and \$4.8 million sales taxes to local governments in 2014. Students also paid \$3.3 million in property taxes on their personal property. Faculty and staff at the University of Arkansas paid \$11.1 million in state income taxes in 2014 along with \$7.4 million in state sales taxes and \$3.7 in local sales taxes. Visitors to the students, athletic events and Office of Admissions paid \$2.2 million in state sales taxes and \$1.1 in local sales taxes. The operations of the University and associated economic activities contributed a total of \$11.1 million in state income taxes, \$21.9 million in state sales taxes, \$10.2 million in local sales taxes, and \$3.5 million in property taxes.

An important indirect impact of the University of Arkansas occurred via the 68,622 alumni who accounted for 2.0 percent of the state's population, but earn \$2.3 billion in wages or 9.0 percent of the state's total wages earned. These alumni paid \$114.8 in state income taxes, \$54.9 million in state sales taxes and \$11.2 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. The University's Technology Licensing Office has 44 current disclosures with patents pending and has helped create a number of companies that emanated from research carried out at the University of Arkansas. 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 planning.

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 2013 industrial structure and technology, and 2013 prices. Trade flows and the results of this analysis were adjusted to reflect prices of the respective years from 2003 to 2014. Economic output values and state and local tax revenues are presented in 2014 dollars.

IMPLAN uses a 525-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

Researchers in the Center for Business and Economic Research are conducting a study to estimate the economic impact of the University on the state and local economies. As a critical part of the study, we are surveying a sample of students concerning items that will help us measure the impact of student earning and expenditure patterns on the economy. Your name was selected at random.

We appreciate your taking a few minutes to complete this web-based survey. Because we are surveying only a small sample of students, it is very important that we receive your response so that we can make sound estimates. Should you choose to participate in the survey; the survey can be completed in less than six minutes. All personal information will be held in complete confidence and will not be disclosed under any circumstances. This study is being conducted under the guidelines of the Institutional Review Board at the University of Arkansas and you should feel free to contact Iroshi Windwalker, Compliance Coordinator, if you have any concerns. Participation in the survey is voluntary; however, participants in the survey will be entered into a drawing to win one of six \$25 gift cards that can be redeemed at any Chartwells facility on campus.

Since it is possible that you may be unsure about some of the dollar amounts requested in the survey, we appreciate your giving your best estimate of those amounts rather than leaving them blank.

```
Q1 Where is your local residence?

Bella Vista [Code = 1]

Bentonville[Code = 2]

Elkins[Code = 3]

Farmington[Code = 4]

Fayetteville[Code = 5]

Goshen[Code = 6]

Greenland [Code = 7]

Johnson[Code = 8]

Lincoln[Code = 9]

Prairie Grove[Code = 10]

Rogers[Code = 11]
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Springdale[Code = 12]
Siloam Springs[Code = 13]
Tontitown[Code = 14]
West Fork[Code = 15]
Washington County (Rural)[Code = 16]
Benton County (Rural)[Code = 17]
Other (please specify)[Code = 18] [TextBox]
Q2 What is your zip code?
Q3 Do you live in:
University housing (not Greek housing)[Code = 1]
A rental property (not owned by the University)[Code = 2]
Self-owned property [Code = 3]
Greek housing [Code = 4]
Parent-owned property [Code = 5]
Other (please specify)[Code = 6] [TextBox]
Display if Q3='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[Code = 1]
$50,000 - $99,999[Code = 2]
$100,000 - $149,999 [Code = 3]
$150,000 - $199,999[Code = 4]
$200,000 - $299,999[Code = 5]
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$300,000 - $399,999[Code = 6]
$400,000 - $499,999[Code = 7]
$500,000 - $749,999[Code = 8]
$750,000 - $999,999 [Code = 9]
$1,000,000 or more[Code = 10]
Q5 How many people live in your Northwest Arkansas household (include yourself)?
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.
Q6 Please fill out the fields applicable to your housing situation. Please enter numeric text in U.S. dollars
Q Rent for a NON-university owned property (total amount paid to landlord):
Q Mortgage (exclude tax and insurance escrow payments):
Q Cell phone (only if 479 area code):
Q Groceries (do not include meal plan):
Q Restaurants and bars:
Q Entertainment, recreation, and sports (include fraternity/sorority social or parlor dues):
Q Clothing:
Q Books (enter amount per semester)
Q Laundry/dry cleaning:
Q Medical and dental out of pocket:
Q Pharmacy (prescription and non-prescription):
Q General merchandise (household furnishings, electronics, furniture, appliances, etc.):
Q Motor vehicle purchases, repair, fuel:
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Q Local transit:
Q Other personal services (barber shop, beauty shop, fitness):
Q7 Estimate month utility payment if not included in rent:
Water and Sewer:
Electric:
Internet:
Natural gas and/or heating oil:
Cable television:
Landline Telephone:
Other:
Q8 Do you own a vehicle?
Yes[Code = 1]
No[Code = 2]
Display if Q39='Yes'
Q9 How many vehicles do you own that are registered locally (in Northwest Arkansas)?
0[Code = 1]
1[Code = 2]
2[Code = 3]
3[Code = 4]
4[Code = 5]
5 or more[Code = 6]
Q10 What is the total market value of all your vehicles that are registered locally?
Less than \$5,000[Code = 1]
\$5,000 - \$9,999[Code = 2]
\$10,000 - \$14,999[Code = 3]

```
$15,000 - $19,999 [Code = 4]
$20,000 - $29,999[Code = 5]
$30,000 - 39,999[Code = 6]
$40,000 or more[Code = 7]
Don't know[Code = 8]
Q11 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:
_____ visitors[Code = 1] [TextBox - Numeric]
Q12 How many days did your visitors typically stay (per visit)?
Please enter numeric text only:
_____ days[Code = 1] [TextBox - Numeric]
Q13 Please estimate how many nights your visitors spent in hotels or motels (per visit):
Please enter numeric text only:
 _____ nights[Code = 1] [TextBox - Numeric]
Thank you
```

Athletics Visitors Expenditure Survey

1.	What is your hometown and zip code? Hor	metown:	Zip:		
2.	How many people are in your party? (inclu	iding yourself)			
	Number of Adults: Number of C	Children:			
3.	What event brought you to Fayetteville too	day?			
	University of Arkansas v Gam	e (Date) Other:			
4.	How many days do you plan on being in No	orthwest Arkansas?	# of Days		
5.	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 a RV park, please specify the number of rooms/sites your party is occupying each night.				
	Hotel/Motel Number of room	ns			
	RV Park Number of sites	;			
	Friends/Family				
	Other				
6.	Please indicate the city of your overnight a stayed in if applicable.	accommodations and/or t	he name of the Hotel/Motel you		
	City: Hote	l/Motel:			
7.	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? Breakf	fast (# of times) Lunch	(# of times) Dinner (# of times)		
8.	Do you plan on purchasing food, merchandise, programs, or anything else while at the event? If so, please indicate how much you plan to spend (excluding ticket purchase).				
	Yes If yes, amount:	\$	No		
	Please indicate which of these your party parkansas:	plans to do while in Fayet Fayetteville	teville or elsewhere in Northwest Other Northwest Arkansas		
	Purchase Fuel (Car or airplane)	YesNo	YesNo		
	Retail Shopping	YesNo	YesNo		
	Buy Groceries/Tailgating Gear	YesNo	YesNo		
	Purchase Packaged Liquor	YesNo	YesNo		
	Rent a Vehicle	YesNo	YesNo		
	Use a Taxi	YesNo	YesNo		
	See a Movie	YesNo	YesNo		
	Go to a Bar/Nightclub	YesNo	YesNo		
	Other things (haircut, tattoo, etc.)	YesNo	YesNo		
9.	Excluding payments for tickets and any moamount YOUR PARTY expects to spend in N	•			
	Thank you. Please enjoy your stay.				

References

¹ "Quick Facts." uark.edu University of Arkansas, n.d. Web. 15 Dec 2014.

² "Employee and Staff Data." oir.uark.edu Office of Institutional Research, University of Arkansas, n.d. Web. 15 Dec 2014.

³ The total figure includes multiple University of Arkansas degrees that may have been awarded to the same student.

⁴ This statistic also does not represent unique students.

⁵ "Degrees and Certificates Awarded." oir.uark.edu Office of Institutional Research, University of Arkansas, n.d. Web. 15 Dec. 2014.

⁶ "Academic Year 2014-2015 Degrees Offered and Fields of Study." oir.uark.edu Office of Institutional Research, University of Arkansas, n.d. Web. 15 Dec. 2015.

⁷ "American Community Survey, 2013" census gov The Census Bureau, n.d. Web. 18 Dec. 2014.

⁸ The survey refers to the student expenditure survey conducted in the fall of 2014.

⁹ Hashbarger, Jim "FY2014." Message to the author. 13 Jan 2015. E-mail.

¹⁰ "Consumer Expenditure Survey." bls.gov Bureau of Labor Statistics, n.d. Web. 15 Dec. 2014.

¹¹ Swenson, Dave. "Using IMPLAN to Evaluate Public Universities Regional Economic Impacts" APLU Workshop on University Economic Impact: Input-Output Analysis and Other Ways to Tell Your Story (2013): Washington D.C. PDF file.

¹² Stolfie, Larrie. "Land Records." Message to the author. 14 Jan. 2015. E-mail.

¹³ Stolfi, Larrie Dean. "Sales and Use Tax." Message to the author. 12 Jan. 2015. E-mail.

¹⁴ "2013 Millage Report." dfa.arkansas.gov Department of Finance Administration, State of Arkansas, n.d. Web. 18 Dec 2014.

¹⁵ "2010 Estimated Taxes." dfa.arkansas.gov Department of Finance Administration, State of Arkansas, n.d. Web. 18 Dec 2014.

¹⁶ Center for Business and Economic Research. Economic Impact of the Arkansas Research and Technology Park. Fayetteville: University of Arkansas, 2014. PDF file.

¹⁷ Childs, Lisa. "CBER Research Assistance." Message to the author. 6 Jan. 2015. E-mail.

¹⁸ Spending estimates are not available for camp and conference attendees.

¹⁹ "Per-Diem Rates." <u>http://www.gsa.gov/portal/category/100120</u> General Services Administration, n.d. Web. 18 Dec. 2014.

²⁰ Murphy, Cliff. "Re: Request for Admissions Office Visitor Information." Message to the author. 16 Dec. 2014. E-mail.

²¹ "Per-Diem Rates." http://www.gsa.gov/portal/category/100120 General Services Administration, n.d. Web. 18 Dec. 2014.

²² Schneller, Heather. "Economic Impact Study." Message to the author. 16 Dec. 2014. E-mail.

²³ Barry, Skyler. "Info." Message to the author. 13 Jan. 2015. E-mail

²⁴ The total figure includes multiple University of Arkansas degrees that may have been awarded to the same student.

²⁵ The figure does not represent unique students.

²⁶ "Degrees and Certificates Awarded." oir.uark.edu Office of Institutional Research, University of Arkansas, n.d. Web. 15 Dec. 2014.

²⁷ Dover, Terri. "Number of Alumni by County." Message to the author. 8 Dec. 2014. E-mail.

²⁸ Becker, Gary. *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education*. Chicago: The University of Chicago Press, 1993. Print.

²⁹ Haveman, Robert and Barbara L. Wolfe. "Social and Nonmarket Benefits from Education in an Advanced Economy." *Education in the 21st Century: Meeting the Challenges of a Changing World*. Ed. Yolanda K. Kodrycki. Federal Reserve Bank of Boston 47th Economic Conference, 2002, PDF file.

³⁰ "American Community Survey, 2013" census.gov The Census Bureau, n.d. Web. 15 Dec. 2014.

³¹ "American Community Survey, 2013" census.gov The Census Bureau, n.d. Web. 15 Dec. 2014.

³² Saline County does not have a county sales tax.

Other Economic Impact Studies

Weldon Cooper Center for Public Service. The Economic Impact of the University of Virginia: How a Major Research University Affects the Local and State Economies. Charlottesville: University of Virginia, 2007. PDF file.

University of California, Berkeley. Serving California, the Bay Area, and the Community: The Economic Impact & Social Benefits of the University of California, Berkeley. Berkeley: University of California, 2006. PDF file.

Office of Economic and Policy Analysis. The University of Arizona Economic and Tax Revenue Impacts FY2004. Tucson: University of Arizona, 2005. PDF file.

Appleseed. Innovation and Opportunity, Harvard University's Impact on the Boston Area Economy. New York: Appleseed, 2004. PDF file.

Appleseed. Education and Innovation, Enterprise and Engagement: The Impact of Princeton University. New York: Appleseed, 2008. PDF file.

Center for Business and Economic Research. The University of Alabama 2007-2008 Economic Impacts. Tuscaloosa: University of Alabama, 2009. PDF file.

³³ "Sales and Use Tax." dfa.arkansas.gov Department of Finance Administration, State of Arkansas, n.d. Web. 15
Dec 2014

³⁴ "Consumer Expenditure Survey." bls.gov Bureau of Labor Statistics, n.d. Web. 15 Dec. 2014.

³⁵ "Individual Income Tax." dfa.arkansas.gov Department of Finance Administration, State of Arkansas, n.d. Web. 15 Dec. 2014.

³⁶ "Center for Community Engagement." Service.uark.edu University of Arkansas. Web 15 Dec. 2014.

³⁷ Deck, Kathy. "Charitable Contributions of University of Arkansas Employees." Message to the author. 15 Dec. 2014. E-mail.

³⁸ *Division of Volunteerism*. Economic Impact of Arkansas Volunteers 2013. Little Rock: Arkansas Department of Human Services, 2013. Print.

³⁹ "Independent Sector." independentsector.org Independent Sector, n.d. Web. 12 Dec. 2014.