



ARKANSAS STATE
UNIVERSITY



*The Economic Impact
of Arkansas State*





EXECUTIVE SUMMARY

During the closing decades of the 19th century, the arrival of the railroads escalated the growth of the small county seat of young Craighead County. Throughout the 20th century, the combination of business, agriculture, health care and education resulted in the thriving city of Jonesboro.

At the center of each major factor of regional growth stands the one institution which touches all economic aspects of Northeast Arkansas: Arkansas State University. Founded in 1909, Arkansas State is a proverbial engine for the Jonesboro market area - Craighead and surrounding counties - as the region builds into the 21st century.

A doctoral research institution, Arkansas State University is the second largest university in Arkansas, and among the largest employers in the Northeast Arkansas region.

With a total economic impact **over \$1.2 billion** to the state, Arkansas State's comprehensive socioeconomic impact extends well beyond the direct financial impact of the more than 13,500 students, over 1,500 full-time faculty and staff, and hundreds of additional part-time workers. The cultural, entertainment and quality of life enhancements to the social environment of the

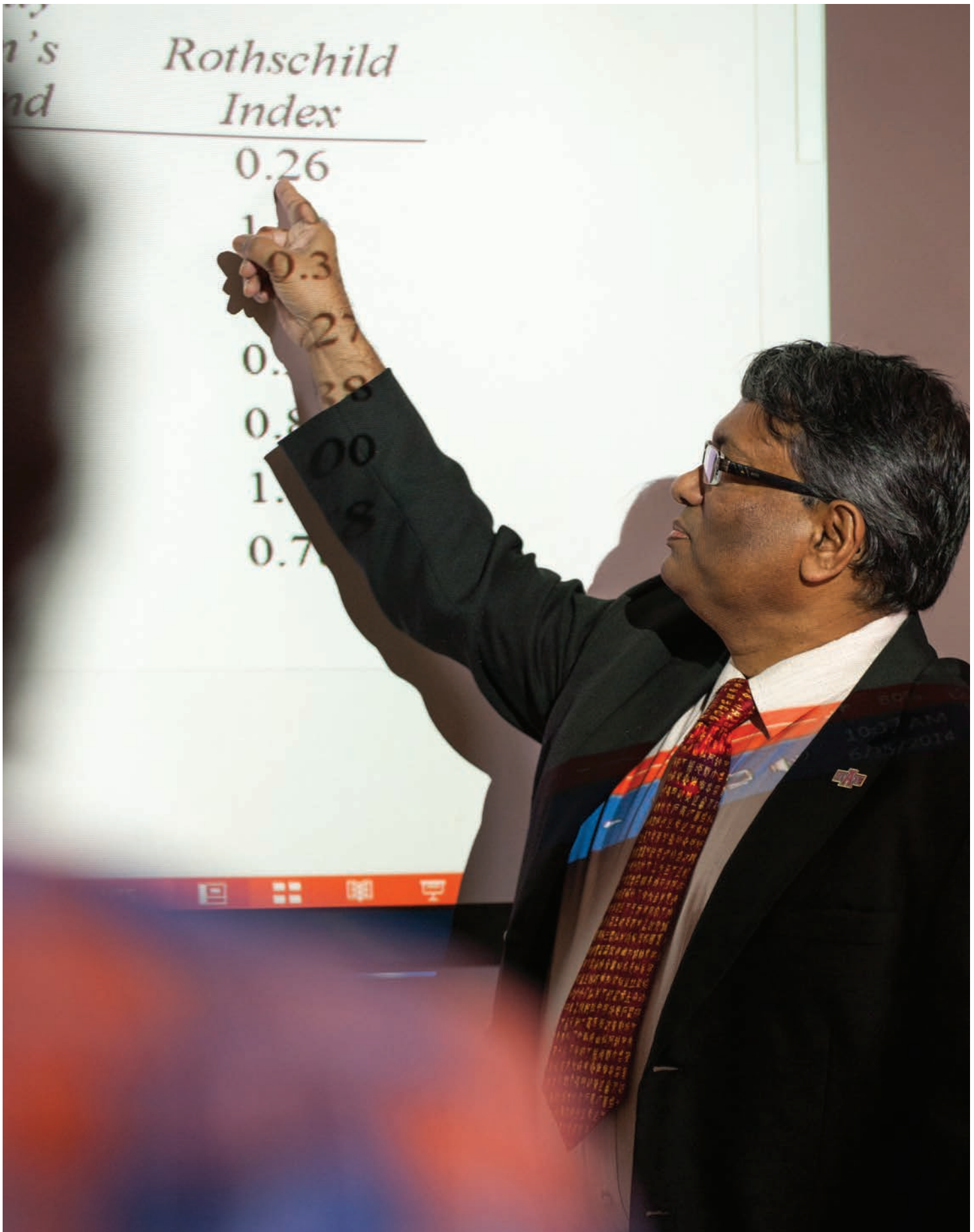
area join with the nexus of human capital, knowledge base and technical ability afforded to its host community by the modern American university.

The higher education anchor and the only major university in the eastern half of Arkansas, Arkansas State is crucial to maintaining Jonesboro as the regional financial, educational, innovation and medical hub of the Delta counties of the state.

This study estimates the total socioeconomic impact of Arkansas State upon the Jonesboro Metropolitan Study Area and the state of Arkansas by utilizing budgetary data from the 2013 fiscal year. Along with a valuation of the direct economic impact of A-State's expenditures, the report illustrates the economic impact of employee, student and visitor spending on the local economy. The study also looks at the annual workforce contribution for the state of Arkansas as a result of the graduates of Arkansas State.

Finally, it breaks down the unique impacts that come only from a major American university upon tourism, research and construction for the region.





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EXECUTIVE SUMMARY (cont'd)

Arkansas State operations, employees, students and visitors generated an estimated **\$343 million** in economic impact during fiscal 2013.

The productivity effect of the Arkansas State alumni base of over 72,000 has an annual impact of **\$890 million** per year on the state of Arkansas. These two combine for an annual total economic impact of over \$1.2 billion per year.

Arkansas State employs more than 1,500 full-time staff resulting in a **\$91.9 million total payroll** and annual operational budget of \$185.9 million.

The over 13,500 students spend money in the local economy on non-discretionary items related to their education (tuition, fees and books) along with substantial discretionary items estimated at **\$68 million** in 2013.

More than 500,000 visitors come annually to Jonesboro as a direct result of Arkansas State-based activities, ranging from NCAA Division I

BCS athletic events to major entertainment hosted at the Convocation Center. The estimated impact of visitors from outside the Jonesboro area is nearly **\$42 million** in 2013 alone.

Within the Jonesboro area, Arkansas State's impact is profound. As the second largest employer in Craighead County, Arkansas State employs approximately 4.4 percent of the total workforce, with 75 percent of current students from local counties and 75 percent of identified living alumni returning to live and work in these counties.

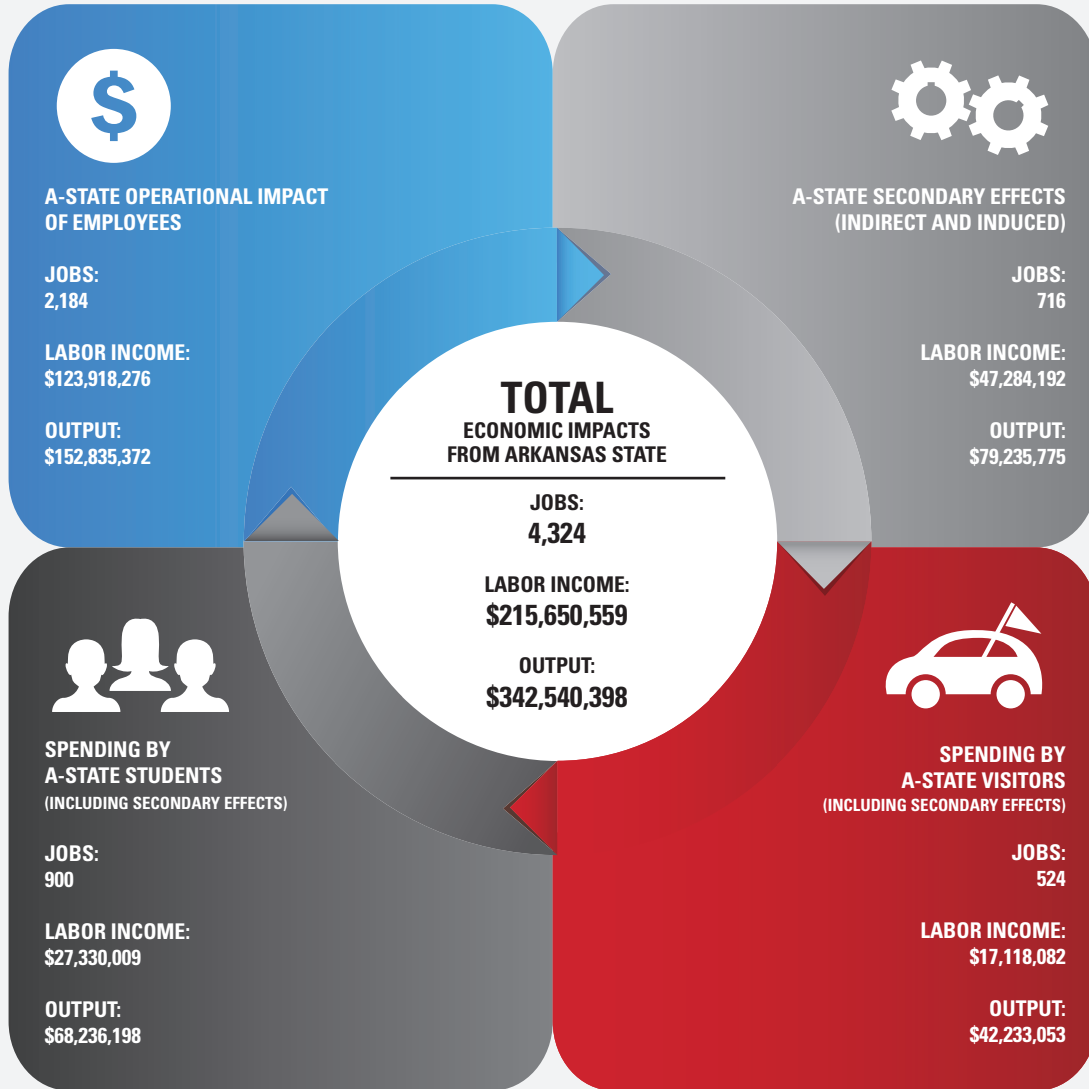
The methodology of the study uses an impact analysis model that is based on consumption or expenditure, often referred to as Input-Output Analysis, utilizing public expenditure data from Arkansas State. It was modeled utilizing the IMPLAN program and was conducted by staff of the Delta Center for Economic Development in Jonesboro with the assistance of professional staff of A-State.

SUMMARY OF ECONOMIC IMPACT FY-2013	
	ANNUAL \$ FY - 2013
<i>IMPACT OF A-STATE OPERATIONS</i>	\$232,071,147
<i>IMPACT OF STUDENT SPENDING</i>	\$68,236,198
<i>IMPACT OF VISITOR SPENDING</i>	\$42,233,053
ECONOMIC IMPACT	\$342,540,398
PRODUCTIVITY EFFECT	\$889,748,592
TOTAL ECONOMIC IMPACT	\$1,232,288,990



ARKANSAS STATE ECONOMIC IMPACT

A look at the Fiscal Year 2013 value of A-State to the state of Arkansas



OVERALL ANNUAL IMPACT OF A-STATE:





DEFINING THE ECONOMIC IMPACT OF ARKANSAS STATE

While estimated by recent U.S. Census updates to have population just over 70,000, any weekday visitor would judge Jonesboro to be a town of 150,000 from the bustle of activity and the quality of its built up environment. This is because Jonesboro is a beacon of development in the region, attracting a large number of commuters to its modern educational, medical, banking, shopping and dining facilities. The driver of this phenomenon is Arkansas State, which develops industry relevant skills, attracts external resources, educates the human capital, and provides the economic rationale for locating businesses, services and medical facilities in its proximity.

Measuring and quantifying the impact of Arkansas State breaks down into several key components. A-State's **regional economic impact** is the starting point. This additional economic activity generated in the region as a result of Arkansas State has three components – direct, indirect and induced impacts. The direct impact is the total operating expenses of A-State, including wages and expenses on goods and services. These are the **primary** effects of A-State.

The primary effects generate further activity through supply linkages in the local economy and is known as the indirect economic impact. Finally, the incomes of the university's employees create additional demand for goods and services that lead to induced local economic growth. Combined, these are the **secondary** economic effects of A-State. The sum of these effects is often a multiple of the initial economic stimulus. Value Added (VA) is the difference in value between final output and the cost of all intermediate inputs for any industry / productive entity; and includes compensation of employees, taxes on production and imports less subsidies, and gross operating surplus.

ARKANSAS STATE BUDGET IMPACT				
Impact Type	Employment	Labor Income	Value Added	Output
Primary	2,184	\$123,918,276	\$141,707,154	\$152,835,372
Secondary	716	\$26,177,020	\$47,285,192	\$79,235,775
Total Effect	2,900	\$150,095,296	\$188,992,346	\$232,071,147

This study uses an impact analysis model that is based on consumption or expenditure (see for e.g., Miller, Ronald, E and Peter D. Blair, Input-Output Analysis: Foundations and Extensions, 1985). The underlying economic rationale is that new expenditures in a region drives the demand for goods and services and lead to economic growth. The economy is divided into over 400 sectors or broad industry categories and 17 institutional categories, which include nine types of households, grouped by income level, six types of federal and state institutions, corporations and an institution for capital. The annual transactions between these entities are mapped into an input-output matrix, which is a double entry accounting system, disaggregated at the county level. The logic of the model is that any additional demand in any sector or institution triggers economic responses from other sectors and institutions through the linkages in the input-output matrix. This is often called the **ripple effect**, since it is similar to the cascade of waves that form when a stone is thrown into a lake.



DEFINING THE ECONOMIC IMPACT OF ARKANSAS STATE (cont'd)

Students attending Arkansas State need to spend money on non-discretionary items like tuition and textbooks as well as on a variety of discretionary items, including local goods and services like rent, entertainment, groceries, restaurants, clothing, electronics, auto repair, etc. They also utilize medical, retail, insurance, banking and other services. It has been documented that discretionary student spending at a major university is a driver for regional economic sustenance and growth. Their spending results in the employment of 900 people according to the IMPLAN model.

ARKANSAS STATE STUDENT SPENDING IMPACT				
Impact Type	Employment	Labor Income	Value Added	Output
Primary	696	\$19,476,922	\$32,266,427	\$44,939,471
Secondary	204	\$7,853,088	\$14,110,379	\$23,296,727
Total Effect	900	\$27,330,009	\$46,376,807	\$68,236,198

Arkansas State also attracts a large number of visitors to the region to attend sporting and cultural events; as well as for graduation, admission, campus visits, recruitment, academic conferences and also to simply visit with friends and family at school. Visitor spending on meals, lodging and merchandise has a significant economic impact on the region, including the employment of 534 people.

ARKANSAS STATE VISITOR SPENDING IMPACT				
Impact Type	Employment	Labor Income	Value Added	Output
Primary	388	\$12,039,176	\$17,267,769	\$26,905,235
Secondary	136	\$5,078,906	\$9,154,641	\$15,327,818
Total Effect	534	\$17,118,082	\$26,422,410	\$42,233,053



THE TOTAL SOCIOECONOMIC IMPACT

Other critical impacts of Arkansas State University rely upon understanding where the region would be without the institution. Many of these factors require additional analysis for direct valuation; however, it is reasonable to consider these “**if not for Arkansas State**” factors.



Research and Economic Development

Scientific research, as well as the continual investigation of social, business and natural paradigms, enables Arkansas State to create and maintain a knowledge base and best management practices for businesses and society. The payback possibilities of a scientific breakthrough, for example in rDNA applications, from the **Arkansas Biosciences Institute** at A-State, is virtually limitless. The assistance to business and industry comes from the **Delta Center for Economic Development** and specialized areas of research.



Investing in Human Capital

Arkansas State upgrades the skill levels of its students through industry-relevant education and training. This results in a lifetime of higher incomes and quality of life. In effect, A-State increases the overall quality of the Arkansas workforce, thereby helping to attract future businesses and other economic investments in the region. Education also has positive health and social externalities by helping to reduce smoking and antisocial behavior, for example. The human capital investment also includes areas like the **Beck P.R.I.D.E. Center for Veterans** and the **Speech and Hearing Clinic** located at the Donald W. Reynolds Center for Health Sciences.



THE TOTAL SOCIOECONOMIC IMPACT (cont'd)



Workforce Development

Arkansas State's largest colleges of instruction line up with the core economic strengths of Jonesboro and Northeast Arkansas (NEA): education, nursing and health care professions, agriculture and finance and business. The ability to **train and educate workers** for the vital industries and enterprises within the local market is a considerable value added to the lower cost of operation for businesses in the region. In addition, the scientific, engineering and computing capabilities of Arkansas State are a valuable resource that is accessible for the region.



Tourism and Entertainment

Community identity with the local university is always a factor. Athletic and cultural events bring individuals from outside the Jonesboro MSA, but also serve as an engine for internal travel and spending unlike any other existing entertainment. In particular, impact upon the local economy by Division I BCS-level football – **one of only 128 similar programs in the nation** – cannot be replicated by any other type of entertainment. As the home of the four largest entertainment venues within eastern Arkansas, Arkansas State's tourism value is significant. Through the Heritage Sites Program, Arkansas State extends its tourism impact across the entire Delta footprint.



Providing an Attractive Physical and Social Environment

Major higher educational institutions create visually pleasing and culturally enriched ambience, besides the many opportunities for sports and academic seminars. The **retail profile of young consumers** added to the **higher income and educational profile of employees** attracts and retains particular businesses to the area. Having a doctoral-level university within the community is an advantage when recruiting industrial investment into the region.



ARKANSAS STATE'S VALUE TO THE STATE WORKFORCE

Beyond the direct economic impact to the state of Arkansas is the effect of the return on investment of the number one product of Arkansas State University: the value added to the lives and abilities of its graduates as a result of higher education.

The Productivity Effect

A major economic contribution of Arkansas State University to its constituents and the state of Arkansas is the *Productivity Effect* of the education, training, technical skills and knowledge imparted to students. The economic metric of the *Productivity Effect* is the value of increased lifetime earnings after receiving a degree from A-State.

Numerous economic studies document the lifetime impact of achieving higher education for the individual. Shown below is one example of the millions of dollars, shown in today's dollars, of that impact (Kantrowitz, 2007):

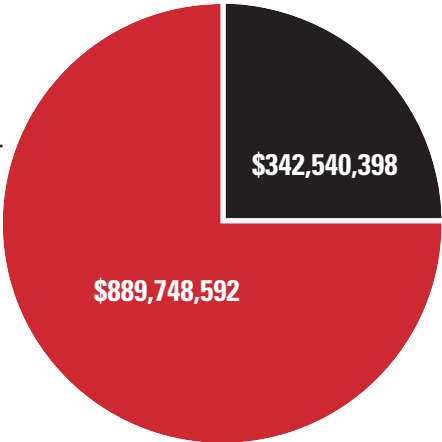
DEGREE ATTAINED	
Lifetime income difference between highest degree attained and a high school degree. (\$ million, today's dollars)	
Professional (e.g., MD, JD)	\$4.08
Doctoral (e.g., Ph.D., Ed.D.)	\$2.92
Master's	\$1.81
Baccalaureate	\$1.21

Applying this type of Productivity Effect from education to the alumni base of Arkansas State University, we can begin to understand the most significant annual impact upon the state of Arkansas. With over **72,000 alumni** across the country, the following numbers only address those currently living in the state. The productivity effect analysis reveals that the undiscounted increased earning benefits over alumni lifetimes to the state of Arkansas is \$111.5 billion, which is \$2.4 billion annually. The discounted **Net Present Value** of this is \$40.9 billion over the lifetime, which is an annual return of **\$890 million** to the state.

TOTAL ECONOMIC IMPACT OF A-STATE FY-2013



Thus the education provided to its alumni by Arkansas State becomes a clear contributor to the skilled workforce necessary to fulfill the state's economic plans.



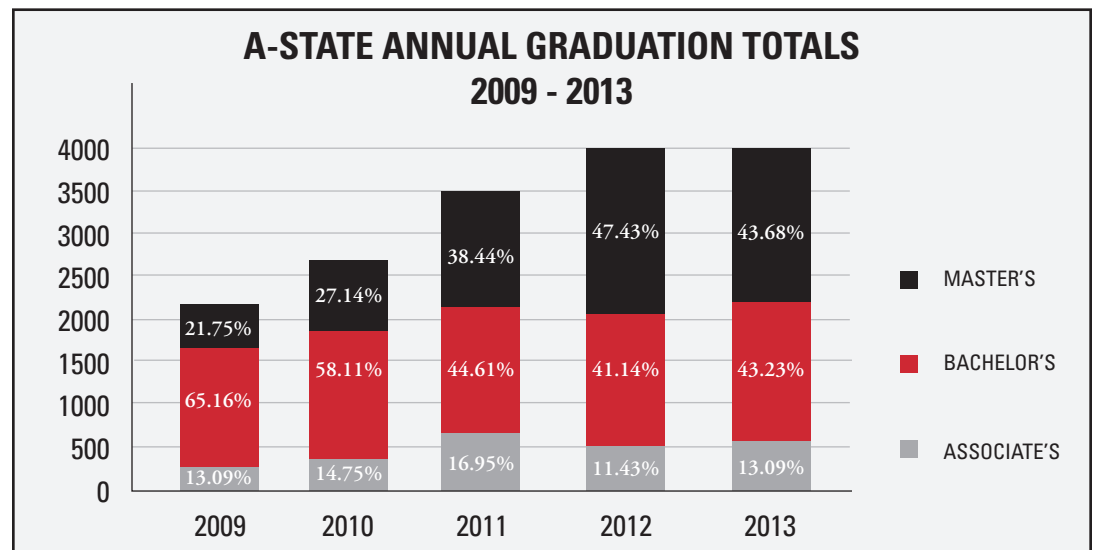


ARKANSAS STATE'S VALUE TO THE STATE WORKFORCE (cont'd)

This analysis can also be interpreted from the viewpoint of return on investment. The state of Arkansas gets a return of 13.8 times for every annual dollar spent on a student at Arkansas State. The Benefit-Cost Ratio to each student is 16.4 times their investment in college education from their increased lifetime earnings.

Analysis of the productivity effect incorporates the time value of money, which implies that the value of money in hand today is higher than present value of the same money tomorrow. The analysis also takes into account the cost of obtaining higher education. This has two components, namely: (i) the actual cost or out-of-pocket expenses of attending college, and (ii) the opportunity cost of attending college. Opportunity cost represents the value of the next-best alternative foregone to acquire the chosen action. In this case, it is the income that the student could have earned if she chose not to attend college.

A trend of alumni degree levels has been applied to the lifetime earning profiles based on recent Arkansas State graduation patterns, as shown in the figure below.



Finally, the socioeconomic impacts of more college graduates are significant. Studies support that individuals with college degrees are less likely to access governmental support services, conduct themselves with healthier lifestyles to put less pressure on health care systems, and with higher levels of income contribute more to our statewide tax base.



SUMMARY OF TAX & BENEFITS IMPACT

Another way to measure the direct economic impact of Arkansas State's payroll is through **taxes and benefits**. In fiscal 2013, Arkansas State's **net** payroll of \$61 million carried with it almost **\$23 million** in employee compensation taxes to the local, state and federal governments. Across all categories of taxes associated with A-State payroll, there was a total local and state tax impact of over **\$18 million** for fiscal 2013, plus **\$33.6 million** in federal tax impact.

Arkansas State's payroll benefits had a significant impact on the state of Arkansas. Fiscal 2013 also returned to the state for **medical services rendered** and for discretionary spending through retirement funds a total of almost \$35 million. The breakdown was close to even in the **\$34,776,478 of economic impact** with \$17,307,578 for medical payment into the state and \$17,468,900 for retirement funds.

SUMMARY OF TAX IMPACT

Total State and Local Tax Impact:
\$18,424,300

Total Federal Tax Impact:
\$33,675,806

SUMMARY OF BENEFITS IMPACT

Medical Services \$17,307,578

Retirement Funds \$17,468,900

Total Impact \$34,776,478



SUMMARY OF RESEARCH IMPACT

Enhancing intellectual growth meets the enriching of lives through Arkansas State's research spending. Already measured as part of the overall economic impact of Arkansas State, a focused look at grants that are devoted specifically to research allows the public to understand the enormous potential existing in our laboratories and classrooms.

In addition to the state appropriations for the operation of the university, A-State receives funding from federal, state and private agencies to sponsor research, service and creative activities. The funding covers salaries of faculty, research, staff and students; including personnel hired exclusively to fulfill the funded projects, as well as equipment, supplies and travel needed for these projects. This represents an infusion of an additional \$20 million-plus into the economy beyond our operating budget.

The potential impact of our research spending and the almost \$50 million in grant awards received in the past three fiscal years could be considered infinite. Why? Consider the real-world implications of work under way at Arkansas State: drought and pest-resistant strains of rice, creation of new types and processes for bio-based fuels, incorporation of waste products to reduce costs for asphalt surfaces. The return on investment for research becomes one of the highest potential factors at Arkansas State.

SUMMARY OF RESEARCH SPENDING

Total Research Spending:
\$22,166,581

Economic Impact:
\$41,451,507

On the Horizon...

According to third party studies (Tripp-Umbach, 2014), the proposed branch campus of New York Institute of Technology's College of Osteopathic Medicine at Arkansas State yields an additional economic impact of \$70 million per year.

TOTAL GRANTS LAST THREE YEARS

2012	\$17,690,547
2013	\$21,105,826
2014*	\$8,438,826

TOTAL **\$47,234,806**

*-- Prior to year-end close



SUMMARY OF CONSTRUCTION IMPACT

Over the past five years, Arkansas State construction resulted in **over \$134 million in capital improvements**. From scheduled completion of the 110,000-square-foot Humanities and Social Sciences Building – the largest single instructional facility in A-State history – to transformational infrastructure with the Marion Berry Parkway, Arkansas State’s dollars rippled through the construction economy. While we utilize FY13 as a snapshot for our economic impact, a longer view of the economic impact of our capital construction projects provides a better perspective on Arkansas State’s growth.

For FY13, capital construction of **\$32.2 million** within the university budget created **\$56.1 million of economic impact** when considered by itself.

**A-STATE CONSTRUCTION FY09-13:
\$134,574,490**

**ECONOMIC IMPACT:
\$234,159,612**

**FY 2013 CONSTRUCTION IMPACT:
\$32,245,421**

**ECONOMIC IMPACT:
\$56,107,032**

On the Horizon...

Arkansas State’s agreement with New York Institute of Technology to locate a branch campus of NYIT’s College of Osteopathic Medicine in Jonesboro means eventual construction of a dedicated building for the osteopathic medical school. Third party studies (Tripp-Umbach, 2014) indicate an \$88 million economic benefit during the construction phase.



SUMMARY OF FOOTBALL GAME-DAY IMPACT

The single-largest tourist impact is Division I BCS football, and it captures the spirit of what Arkansas State means to the region. The success of the Red Wolves the past three seasons – consecutive Sun Belt Conference Championships and back-to-back bowl victories – isn't just on the field. Arkansas State's licensing revenue is up double digits over the period, indicating more purchases of Red Wolves gear.

Ticket sales for Red Wolves football marked single game and season highs during the 2012 season. On tourist impact alone, the fans who traveled into Jonesboro from outside our local area for football games during Fall 2012 made a **\$7,710,066 impact**, or \$1,285,011 average per game for the six-game season.

Football is more than ticket sales. It is tailgating supplies, souvenirs and game-day gear, fuel-up vehicles and generators, and often eats out pre- or post-game – along with concessions consumed within the venues. While the activities of our fans inside our local area are not a part of the tourism impact, the import substitution of other entertainment to the local economy is significant. These are weekends that area **residents are not leaving for alternatives**, and not taking their tax dollars with them. **A follow-up study** detailing the spending habits of all fans – both local and those outside the region – **will be conducted this fall to measure this additional impact.**

Home games also generate other influences on the local economy. The operations of the program itself represent \$5,703,990 of Arkansas State's overall figure, with an estimated impact of **\$8,670,064**. In addition to the coaches, staff and administrators associated with football through the Athletic Department, the games themselves provide a **combined 1,894 part-time jobs** over the course of the season.

RED WOLVES FOOTBALL

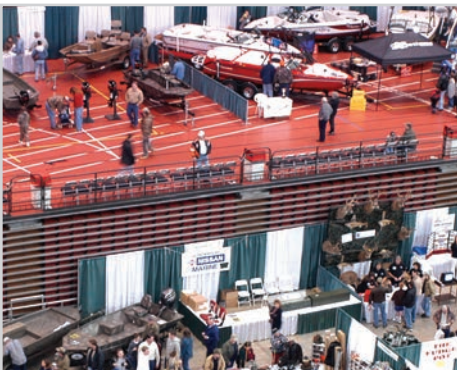
Total Tickets Sold:	151,254
Outside Jonesboro Area	32,949
Tourism Impact	\$7,710,066
(Avg. Per Game)	\$1,285,011

On the Horizon...

Future football non-conference opponents are guaranteed **4,000 tickets**, but **SEC-caliber** opponents typically **purchase 10,000** for road games. Based on the Arkansas Department of Parks and Tourism standard per-person per-trip, projected future single-game impact for opponents who sell out their entire 4,000 allotment and drive sales to 10,000 tickets is **\$4,251,690** economic impact.

FOOTBALL OPERATING BUDGET ECONOMIC IMPACT:

\$8,670,064



SUMMARY OF TOURIST IMPACT

With four of the largest venues in the Northeast Arkansas region, Arkansas State is an engine for tourist impact through its visitors to sporting and cultural events. As **one of only 128 members of NCAA Division I BCS-level sports**, Arkansas State's Department of Athletics generates tremendous economic impact on local and regional retailers, hotels and motels, food service, and tourist-related travel areas. The **Convocation Center** is the major concert and convention venue for the Northeast Arkansas region and accommodates multiple events beyond Red Wolves Athletics. Through the **Fowler Center** and the **Carl R. Reng Student Union**, Arkansas State hosts numerous cultural and civic events each year.

For all events, over half-a-million people visited Arkansas State for events in FY13, **557,836**. Ticket sales are a key factor in measuring the economic impact of Arkansas State, and an analysis of the fiscal year 2013 shows 72 percent of all tickets are purchased in local counties with the 28 percent traveling from counties outside the Jonesboro area become the basis for the IMPLAN's modeling of the effect of visitors resulting in \$42.2 million in economic impact.

Arkansas State brings students and families to Jonesboro for two great moments in their lives: the recruiting process to decide on a university, and to celebrate the achievement of a degree through graduation. Neither of these moments generates ticket revenue, but they do book hotel rooms and special meals during their trips to Jonesboro. There are also academic conferences, economic development meetings, educational seminars and other special events hosted by A-State, which bring attendees to our facilities, again both from within our home counties and from across the region and state.

VISITOR ECONOMIC IMPACT:

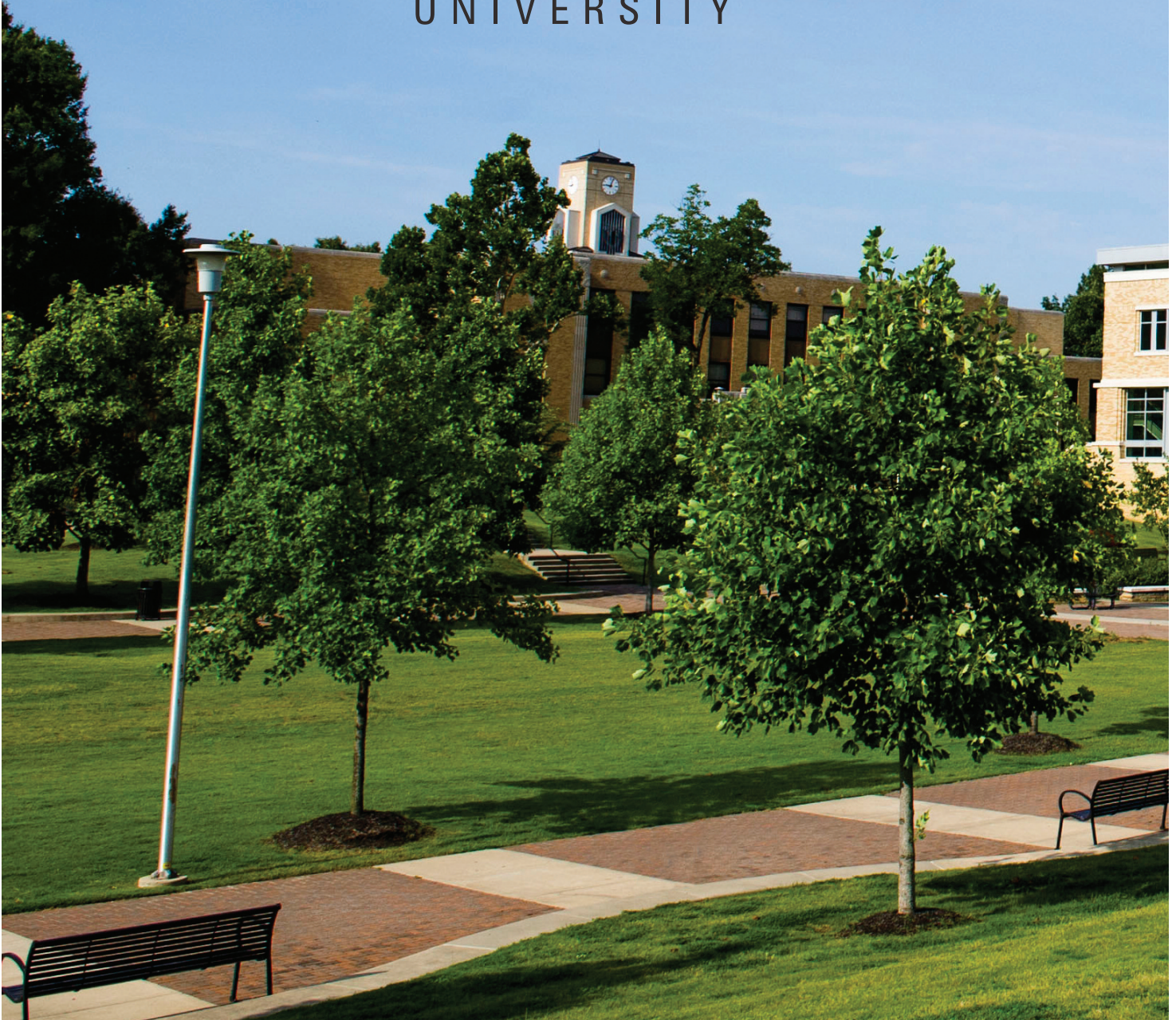
\$42,233,053

EVENT ATTENDANCE AT A-STATE:

Convocation Center Events	194,507
Athletic Department Events	272,196
Fowler Center Events	44,418
All Other University Events	46,715
Total Event Attendance	557,836



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CREDITS: The Delta Center for Economic Development and Associate Professor for Economics Dr. Gauri Guha were primary investigators for *The Economic Impact of Arkansas State*. Guha (Ph.D., Penn State) studied at the Indian Institute of Foreign Trade and Birla Institute of Technology and Science prior to joining A-State in 2002. Design and layout were provided by A-State Creative Services; photography was provided by Andrew Ferguson with additional images provided by staff photographers of the Office of University Marketing and Communication and the Sports Media Relations Office. Copyright 2014, Arkansas State University.





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