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Executive Summary

Indiana University Bloomington has played a fundamental role in the state since it was established in 1820. IU Bloomington provides the residents of Indiana with affordable and accessible education at a premier research university. As a result, IU Bloomington strengthens the economic competitiveness of the state and increases the earning power of its residents. IU Bloomington's impact on the state extends beyond its academic mission. The university's budget, the civic engagement of students and staff, and the campus' cultural contributions also bestow many economic benefits to Indiana.

The present study was undertaken to measure how IU Bloomington improves the lives of all Hoosiers. This report presents policymakers, university officials, and Indiana taxpayers with comprehensive yet conservative estimates of the university's impact. IU Bloomington receives a significant commitment of state resources, and it is useful for any public institution, including universities, to show the rewards of such commitment.

One way to present how Indiana benefits from IU Bloomington is to consider results related to the core mission of the university as well as results that are collateral to the university achieving its core mission. The core mission is education and research. Collateral benefits would include the economic benefits of the university spending associated with its core mission or the economic benefits of, for example, the service-learning that mobilizes students to work for free in the community.

A variety of methods were used to measure the core and collateral benefits of IU Bloomington. The core benefits of IU Bloomington—meaning those benefits that relate to the university's core mission of education and research—are derived from university records or government data sources. These data highlight characteristics of the student body, the number and type of degrees conferred, the settlement patterns of recent graduates, and the amount of outside research funding IU Bloomington attracted. Core benefits data help to answer many key questions including: Do alumni apply their skills in the state or find work elsewhere? Does IU Bloomington curriculum support Indiana's economic development priorities in the life sciences? Does university research and development generate private-sector commerce?

This analysis of core benefits focuses almost exclusively on tangible metrics within the state. However, many benefits associated with the university's educational and research mission are difficult to quantify and are global in reach. Moreover, some benefits that flow from IU Bloomington's core mission result in tangible economic benefits to the individuals who attend the university, namely, the expected increase in lifetime earnings resulting from higher educational attainment.

Following the presentation of the core benefits, attention turns to the collateral benefits of IU Bloomington. These benefits recognize the effects that university expenditures and the activities of students, staff and visitors have on the local community. For instance, traditional input-output analysis reveals the economic activity related to the university's operating budget and student spending. The monetary value of student service-learning and student volunteering is also added into the total of collateral benefits. Additionally, the value of faculty and staff civic engagement is also measured.

The following bullet points summarize the key findings of these analyses.

Core Mission Benefits

- The first section of this report, **Characteristics of IU Bloomington Students,** presents profiles of the student population and its recent graduates. IU Bloomington's fall 2007 enrollment totaled 39,000 students—57 percent of whom were Indiana residents. Of the university's 34,000 degree recipients between 1998 and 2002, 39 percent were residing in Indiana as of 2008. The two leading counties of residence for this cohort are Marion County, Indiana, and Cook County, Illinois.

- The **Contribution to Human Capital** section examines IU Bloomington's degree output and the economic value of these degrees to recipients. IU Bloomington conferred 42,400 baccalaureate, master's, professional, and doctoral degrees between 2002 and 2007, one-quarter of the total for all of Indiana's public universities. The most common fields of study at both the baccalaureate and master's level were business administration and education. The university also awarded 3,300 degrees related to life sciences over this period.

- IU Bloomington graduates can expect far greater lifetime earnings than people with a two-year associate's degree. The typical male IU Bloomington graduate can expect to earn $1.8 million over his lifetime and the typical female graduate can anticipate $1.3 million in lifetime earnings. These figures are 38 percent and 32 percent greater, respectively, than the expected lifetime earnings of male and female associate's degree recipients.

- The section on **University Research and Business Development** details annual sponsored research expenditures at IU Bloomington, as well as technology transfer and business start-up activity. IU Bloomington has averaged $90 million in annual research expenditures supported by external contracts and grants in fiscal years 2006 through 2008. 69 percent of these funds came from the federal sources. Between 2004 and 2007, university research generated 188 new invention disclosures, 113 new patent applications and 28 new patents issued.

Collateral Benefits

This report measures the economic benefits of IU Bloomington's **Civic Contribution.** Through service-learning programs, unpaid internships and volunteerism, students and staff and faculty "give back" to their community and to the state. Table 1 presents the imputed dollar value of their contributions.

- In addition, this report notes that members of the IU Bloomington community also made $4,133,000 in charitable contributions to organizations operating within the campus region.

- IU Bloomington also enriches the state through sport and culture. Whether IU Bloomington's basketball team or the presence of a world-class music school, IU Bloomington gives Hoosiers throughout the state something to be proud of. The section on

Cultural Enrichment enumerates the events that make hundreds of thousands of people applaud and cheer.

- Finally, the **Economic Footprint** section reports the employment and economic significance of spending by the university, students and visitors. The estimates in Table 2 report the effects of direct expenditures (e.g., university purchases and compensation of faculty and staff) as well as the "ripple effects" of these expenditures within the community. In addition to IU Bloomington's employment of 7,325 faculty and staff, the university's spending and student and visitor spending accounts for an additional 11,500 jobs in the state.

Table 1: Estimated Benefits of Student and Staff Civic Contributions, IU Bloomington, 2006-2007

Civic Contribution	Estimate of Economic Benefit
Service-Learning	$101,100
Unpaid Internships	$124,300
Student, Faculty and Staff Volunteerism	$10,279,700
Total	$10,505,100

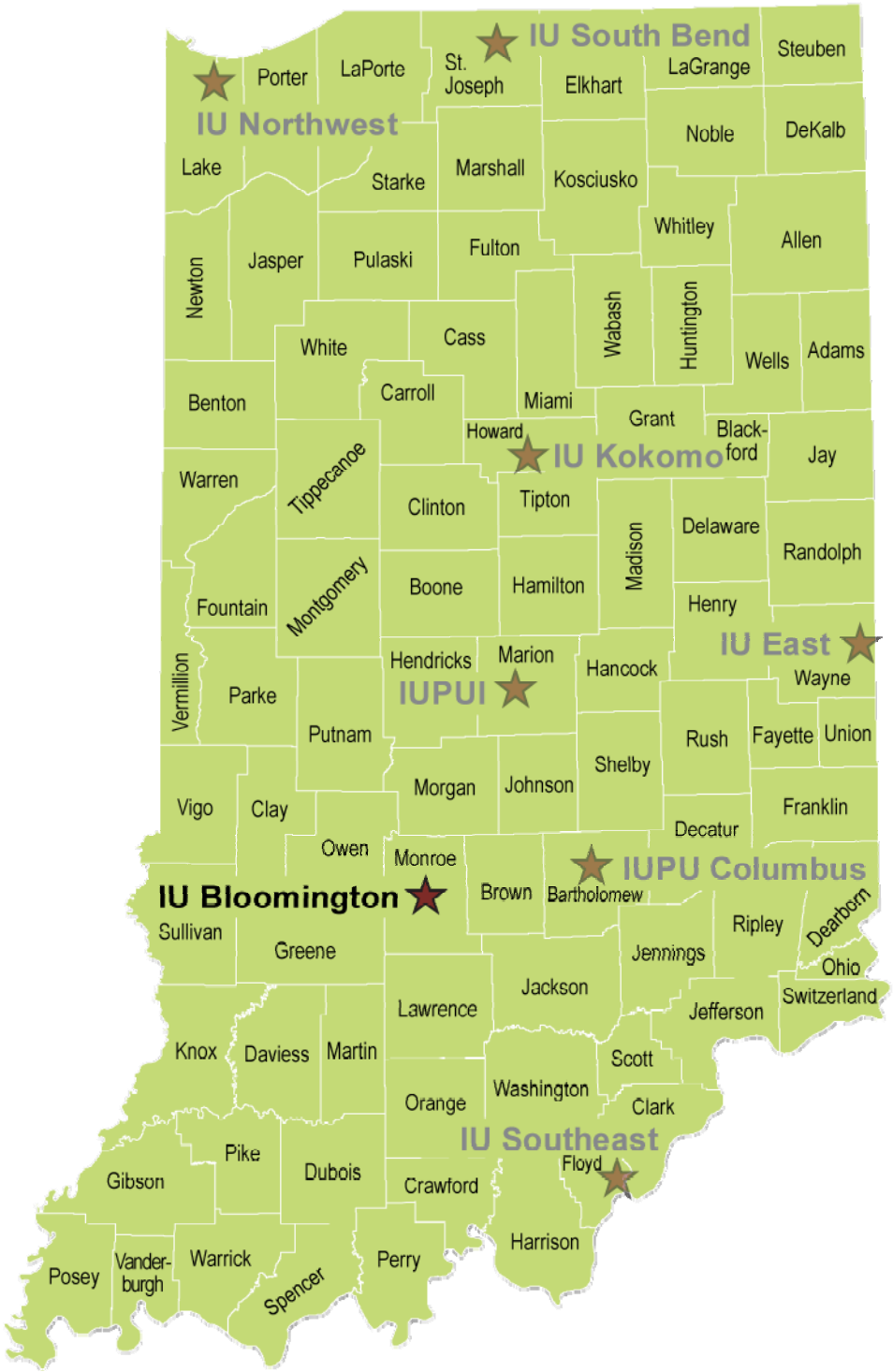
Source: Indiana Business Research Center (IBRC)

Table 2: Estimated Employment and Economic Footprint, IU Bloomington, 2006-2007

Type of Spending	Total Employment Effects (number of jobs)	Total Economic Output Effects (in millions)
Faculty and Staff Compensation	4,850	$820.1
University Purchases and Construction Expenditures	2,480	$451.0
Student and Visitor Expenditures	4,231	$591.0
Total	11,561	$1,862.1

Source: IBRC, using IMPLAN model results

Figure 1: IU Bloomington Campus Region



Source: Indiana Business Research Center

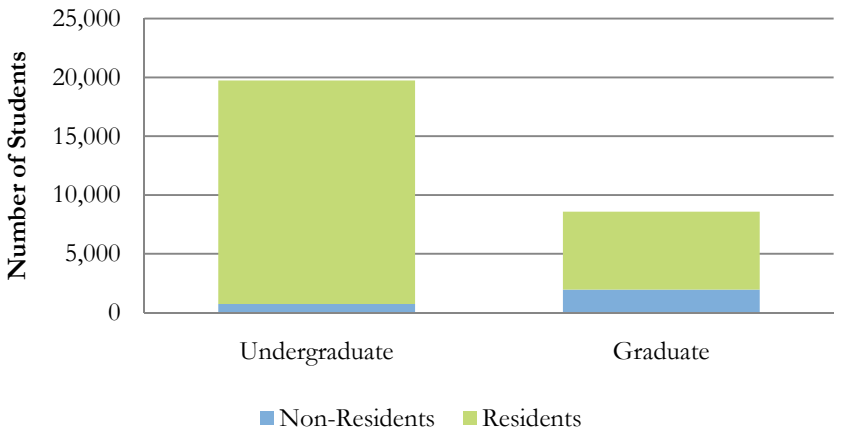
Characteristics of IU Bloomington Students

In the fall of 2007, IU Bloomington had an enrollment of 38,990 students. Eighty-eight percent of these students attended full-time—the highest percentage of full-time enrollment for any campus in the Indiana University system.

Student Origin

Overall, 57 percent of IU Bloomington students are Indiana residents. This varies greatly by student status: 36 percent of undergraduates come from out of state, while 70 percent of graduate students are drawn from outside Indiana (see Figure 2).

Figure 2: IU Bloomington Application Residency by Student Status, Fall 2007



Source: IBRC, using data from the Office of University Planning, Institutional Research and Accountability

Students come to IU Bloomington from all 50 states and the District of Columbia. Table 3 shows the top 10 states sending students to IU Bloomington. Illinois accounts for the second largest number of full-time students at nearly 11 percent.

Table 3: Top 10 States for Full-Time IU Bloomington Students, Fall 2007

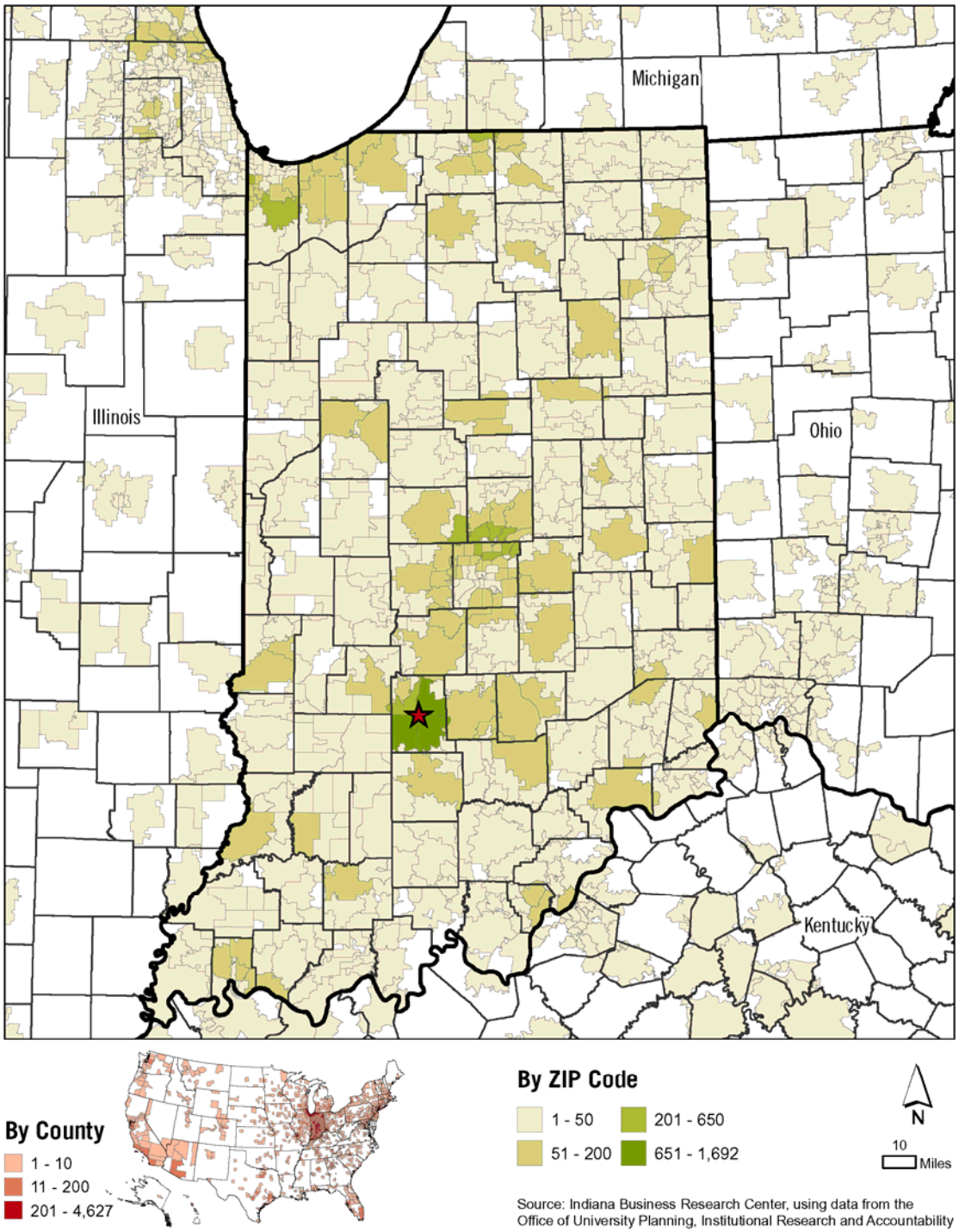
Home State	Percent of Full-Time Students
Indiana	63.7
Illinois	10.5
Ohio	2.9
New York	2.2
Michigan	1.5
California	1.4
New Jersey	1.4

Home State	Percent of Full-Time Students
Missouri	1.1
Pennsylvania	0.8
Texas	0.8
Top Ten	86.3

Note: The international/unknown category accounts for 5.7 percent of full-time students.
Source: IBRC, using data from the Office of University Planning, Institutional Research and Accountability

Figure 3 shows the number of full-time students by ZIP code for Indiana and the surrounding areas.

Figure 3: Residence of Origin for Full-Time Students of IU Bloomington, Fall 2007

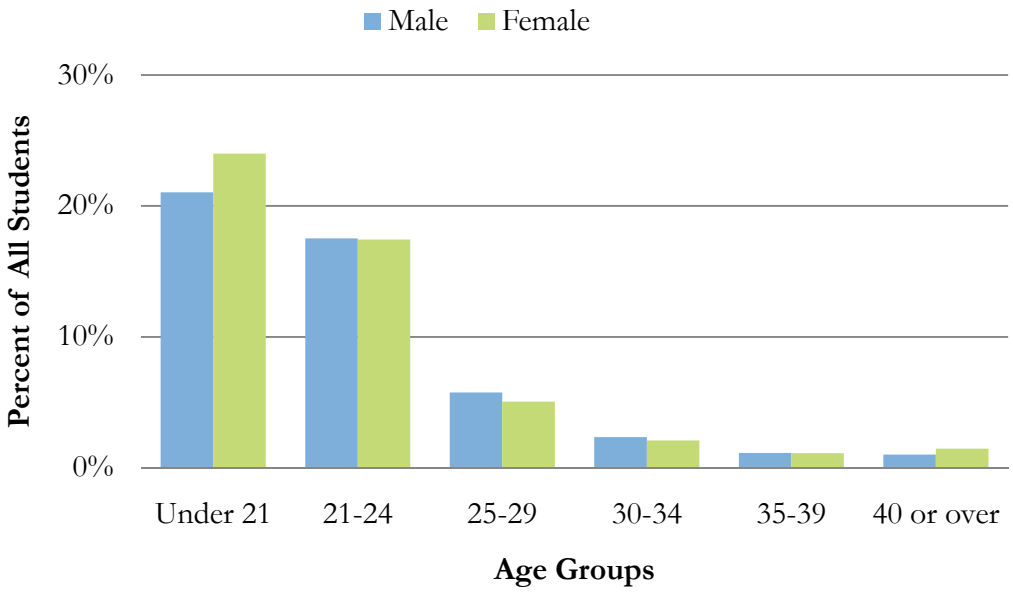


Student Characteristics

Age and Gender

Forty-five percent of IU Bloomington students are under the age of 21. As shown in Figure 4, the gender breakdown is evenly split between men and women except in the youngest age group where female students outnumber male students by 3 percentage points—a difference of roughly 1,150 students. Overall, women comprise 51 percent of the student body.

Figure 4: IU Bloomington Students by Age and Gender, Fall 2007



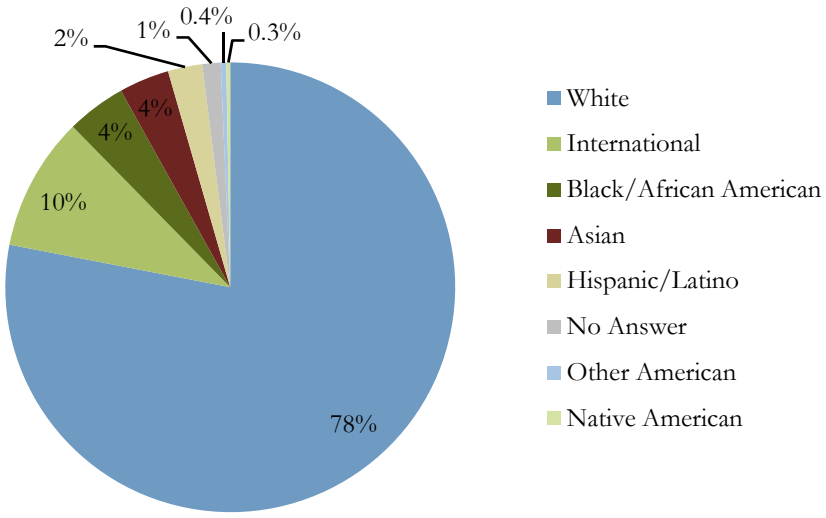
Source: IBRC, using data from the Office of University Planning, Institutional Research and Accountability

Ethnicity

Seventy-eight percent of the student body categorize themselves as white (see Figure 5). The Bloomington campus is unique in the fact that international students make up 10 percent of the student population. Note that all international students are grouped together because ethnicity data were collected only for students applying from within the United States.

Under-represented minorities (blacks, Hispanics and Native Americans) account for 7 percent of all students. Blacks comprise 4 percent of the student body, followed by Hispanics at 2 percent and Native Americans at 0.3 percent.

Figure 5: Ethnic Distribution of IU Bloomington Students, Fall 2007



Note: Data on ethnicity were collected only for students applying from within the United States. The international category includes all those who applied from elsewhere in the world, because the concept of ethnic identification varies from country to country. The Native American grouping includes both the American Indian/Alaska Native and Native Hawaiian/Other Pacific Islander categories.

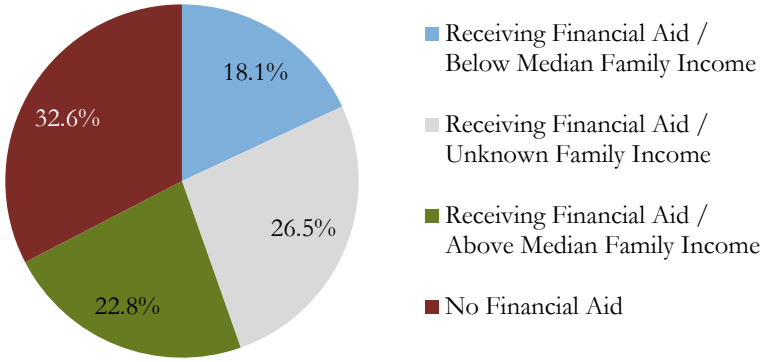
Source: IBRC, using data from the Office of University Planning, Institutional Research and Accountability

Access and Affordability

Figure 6 shows that over two-thirds of full-time IU Bloomington students receive financial aid. Additionally, about 18 percent receive financial aid and are from households with family incomes lower than the Indiana median of $47,074. Among IU campuses, IU Bloomington had the largest proportion of financial aid recipients with family incomes higher than the Indiana median (27 percent) This is likely due to the fact that this campus has the most students who are non-Indiana residents and thus may pay the higher out-of-state tuition rate and also whose financial records are likely to be suppressed due to geographic restrictions.[1]

[1] The high proportion of out-of-state students is also the likely reason why the family incomes are "unknown" for a large proportion of financial aid recipients.

Figure 6: Financial Aid and Family Income Status of Full-Time IU Bloomington Students, 2006-2007



Note: Where family income data for financial aid recipients is "unknown," income data may have been suppressed due to confidentiality requirements or the aid recipient may not be an Indiana resident.

Source: IBRC, using data from the Indiana Commission for Higher Education

Settlement of Alumni

Where alumni settle after graduation plays a key role in analyzing the ultimate significance of a university. In contrast to those who leave the state, alumni who remain make ongoing contributions (e.g., increased productivity, income and cultural contributions) to their region well after they complete their degrees. Table 4 shows that 39 percent of all IU Bloomington graduates between 1998 and 2002—both Indiana natives and non-natives—resided in the state as of 2008. The next most popular destination states were Illinois and California.

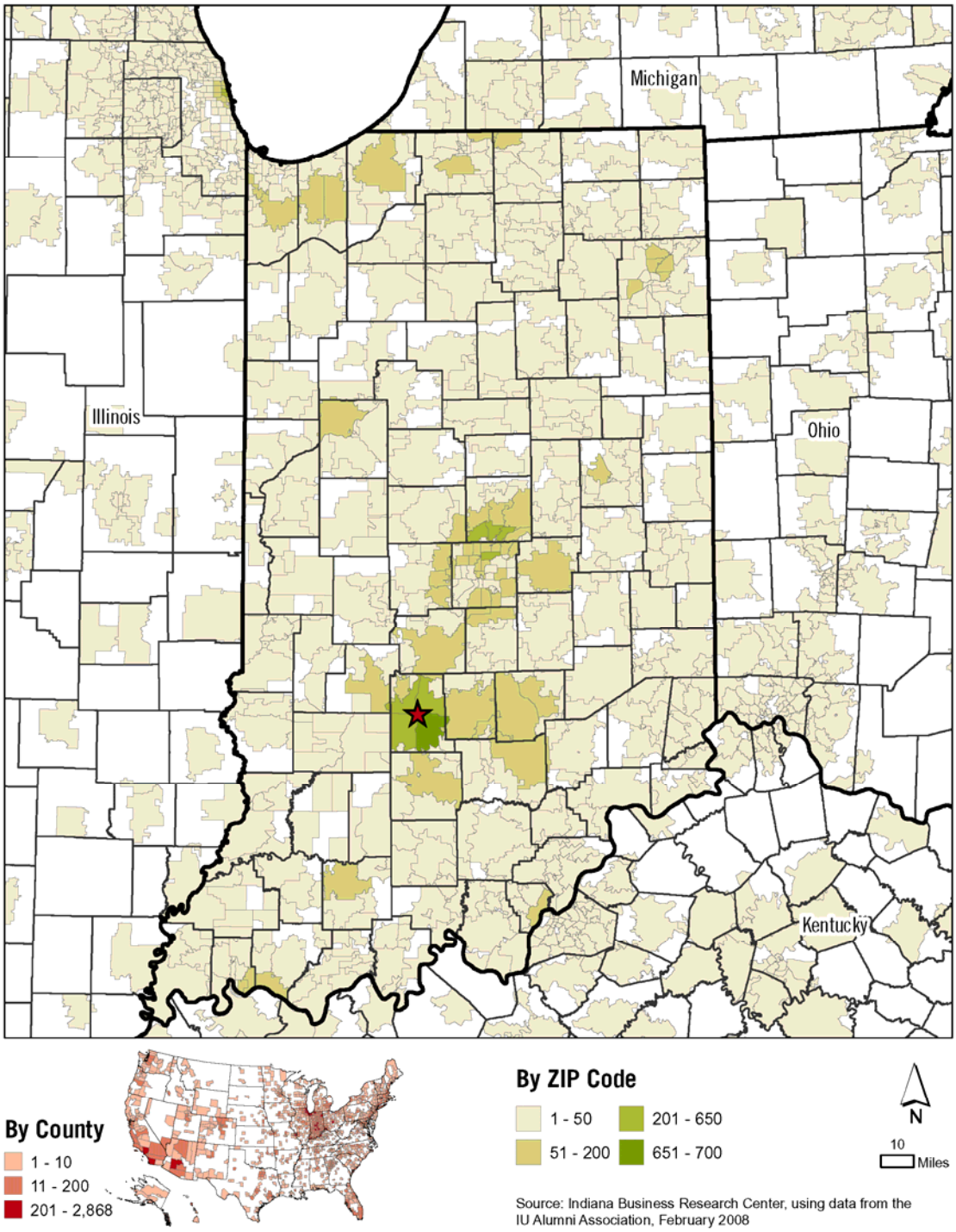
Table 4: Top 10 States for IU Bloomington Graduates, Degrees Conferred 1998-2002

Residence	Percent
Indiana	38.5
Illinois	11.2
California	4.9
Ohio	3.4
New York	3.4
Michigan	2.1
Texas	2.1
Florida	2.1
Virginia	1.7
Georgia	1.6
Top Ten	70.7

Note: The international/unknown category accounts for 8.0 percent of graduates.
Source: IBRC, using data from the IU Alumni Association as of February 2008

Figure 7 shows the settlement pattern for graduates between 1998 and 2002 by ZIP code for Indiana and the surrounding states. IU Bloomington graduates who earned their degrees in this period have settled in every Indiana county. Recent graduates tended to settle in Marion County, Indiana (2,868 graduates), Cook County, Illinois (2,496 graduates), and Monroe County, Indiana (1,992 graduates).

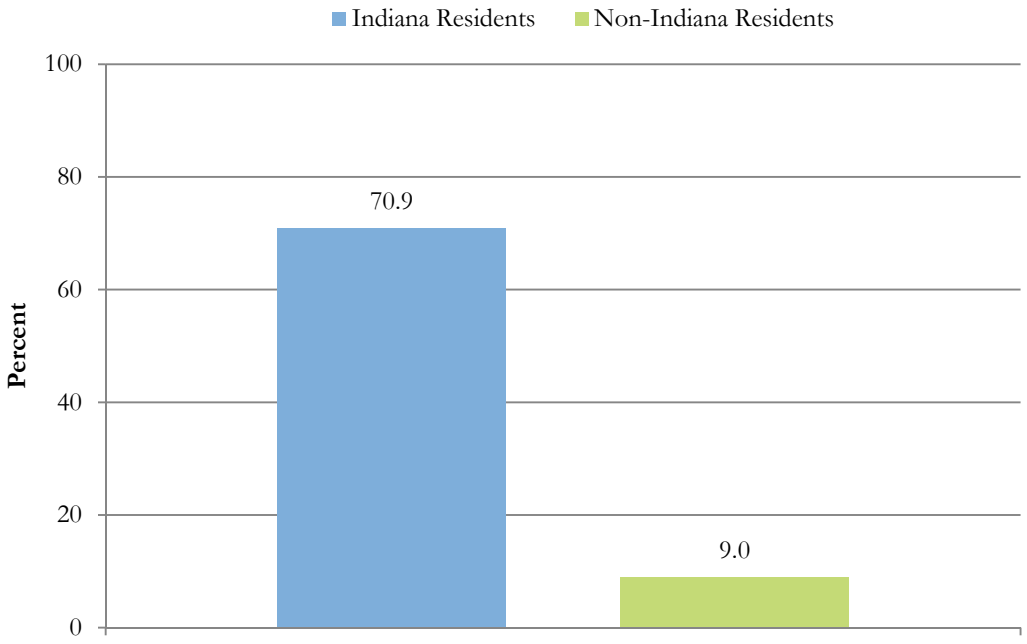
Figure 7: Settlement Pattern of IU Bloomington Graduates, Degrees Conferred 1998-2002



Retention of Graduates in Indiana

Based on recent settlement patterns, IU Bloomington alumni who were originally from Indiana are likely to reside in the state after graduation. Figure 8 shows that about 71 percent of Indiana residents who graduated from the Bloomington campus between 2002 and 2005 lived in Indiana at the start of 2008.[2] Of those who were originally from other states and countries, 9 percent of recent IU Bloomington graduates resided in Indiana in early 2008.

Figure 8: Percentage of IU Bloomington Graduates (Baccalaureate or Higher) between 2002 and 2005 Residing in Indiana as of February 2008



Note: This chart represents 17,174 Indiana residents and 11,024 non-Indiana Residents but does not include the 2,774 graduates (8.97 percent of the 30,972 total), for which neither current location nor residency status was available.

Source: IBRC, using data from the Indiana University Alumni Association and the Indiana University Office for University Planning, Institutional Research and Accountability

Table 5 shows that, among graduates from 2002 to 2005, most Indiana residents at all degree levels chose to remain in the state. This is particularly true of baccalaureate degree graduates, of which 72 percent were living in Indiana at the start of 2008.

[2] Neither current location nor residency status information was available for 2,774 graduates, representing 8.97% of the total of 30,972 graduates (baccalaureate degree or higher) during this three-year period

Table 5: Percentage of IU Bloomington Graduates between 2002 and 2005 Residing in Indiana in February 2008, by Student Residency Status and Degree Earned

Student Status:	Indiana Resident		Non-State Resident	
	Number of Alumni	Percent living in Indiana	Number of Alumni	Percent living in Indiana
Baccalaureate	14,279	72.3%	6,637	5.4%
Master's	1,997	66.6%	3,014	15.2%
Professional	565	63.4%	460	10.0%
Doctoral	333	50.8%	913	14.0%
Total	17,174	70.9%	11,024	9.0%

Note: Only the highest degree earned at Indiana University is included. No information on student residency status and/or current location was available for 2,774 alumni (8.97 percent of the 30,972 total). "Professional" degrees refer to doctoral-level degrees received in law and optometry.

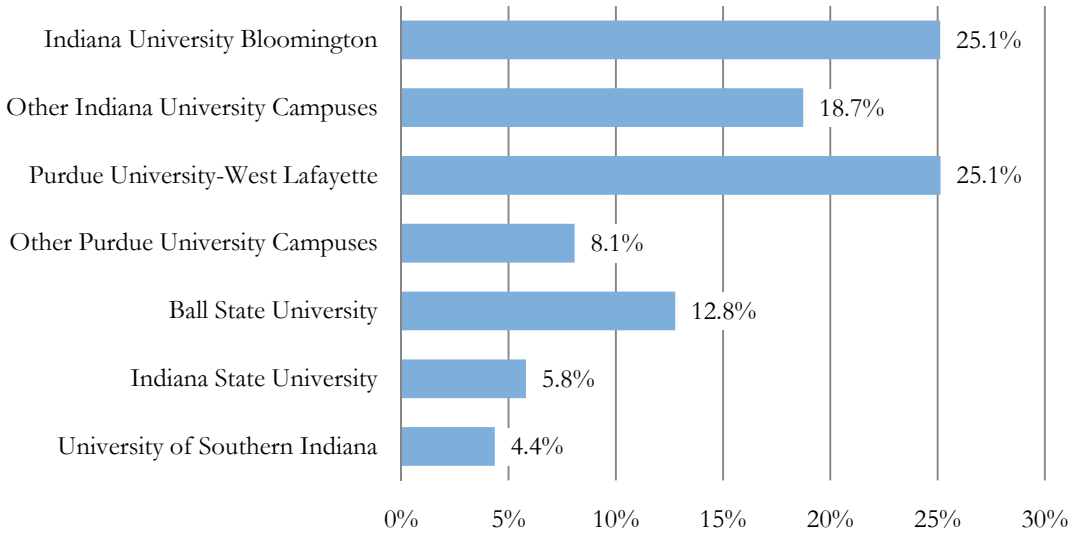
Source: Indiana Business Research Center, using data from the Indiana University Alumni Association and the Indiana University Office for University Planning, Institutional Research and Accountability

Contribution to Human Capital

Degrees Conferred

IU Bloomington granted a quarter of the baccalaureate degrees conferred in the past five years by Indiana's public universities, roughly the same amount as Purdue University's West Lafayette campus. Figure 9 also shows that the entire IU system granted almost 44 percent of the 121,285 baccalaureate degrees by state universities. Purdue University campuses represented another third of these degrees. Ball State University, Indiana State University and the University of Southern Indiana granted the remaining 23 percent of baccalaureate degrees.

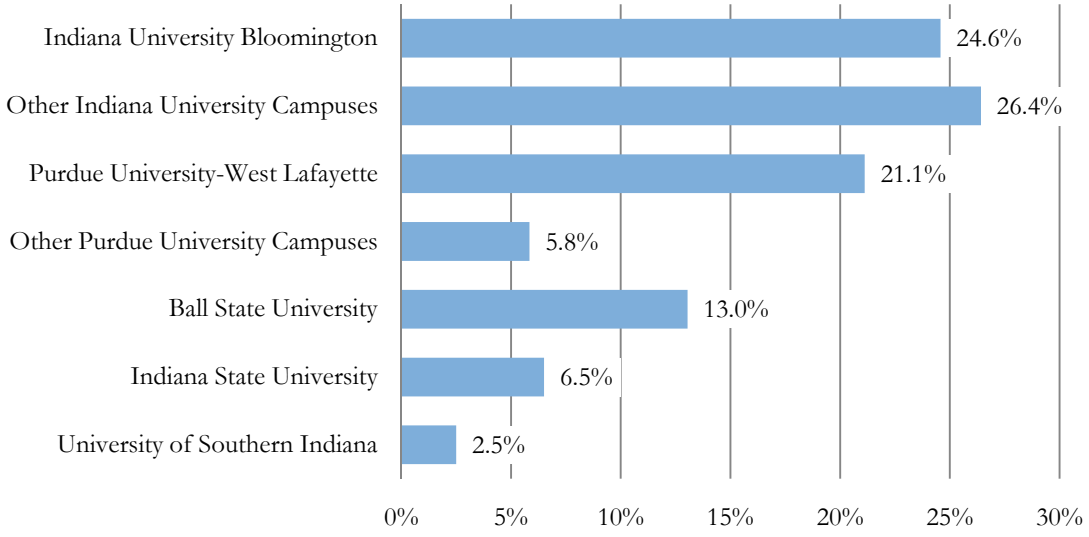
Figure 9: Baccalaureate Degrees Conferred by Indiana Public Universities, 2002-2007



Note: The total number of degrees conferred was 121,285.
Source: IBRC, using data from the Indiana Commission for Higher Education

Between the 2002 and 2007 academic years, 35,153 master's degrees granted were granted by Indiana's public universities. Figure 10 shows that IU Bloomington led its peers by granting almost a quarter of these degrees, almost as many as all other Indiana University campuses combined. All Purdue University campuses, led by the West Lafayette campus, conferred slightly more than a quarter of all master's degrees. The remaining 22 percent of master's degrees were granted by Ball State University, Indiana State University and the University of Southern Indiana.

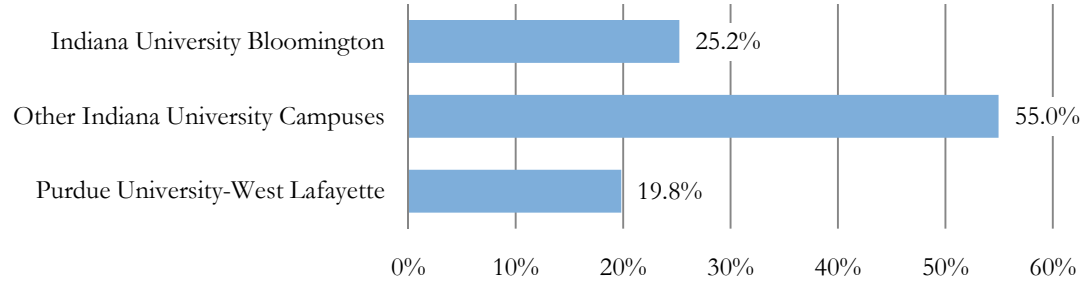
Figure 10: Master's Degrees Conferred by Indiana Public Universities, 2002-2007



Note: The total number of degrees conferred was 35,153.
Source: IBRC, using data from the Indiana Commission for Higher Education

Figure 11 shows that IU Bloomington granted a quarter of all professional degrees (e.g., law and medical degrees) conferred by Indiana's public universities between 2002 and 2007. Moreover, the Indiana University statewide system accounted for over 80 percent of professional degrees granted by state schools.

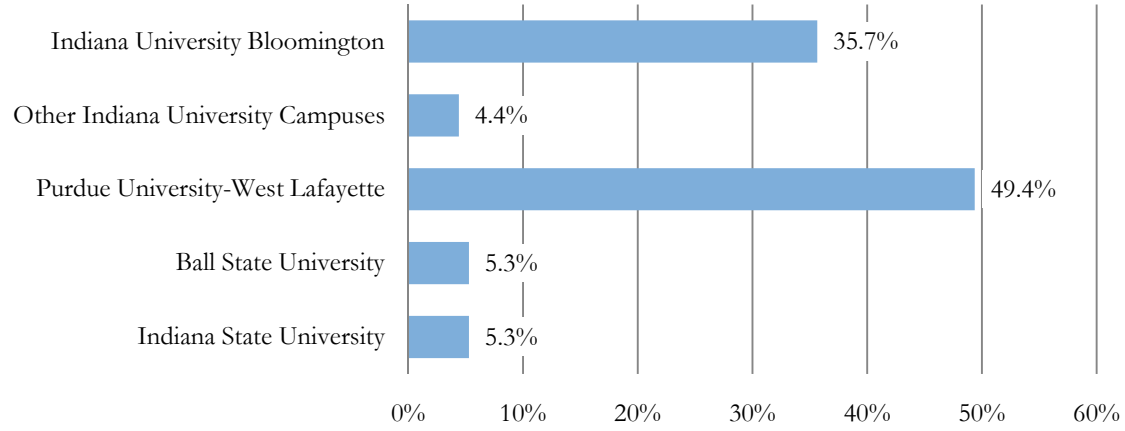
Figure 11: Professional Degrees Conferred by Indiana Public Universities, 2002-2007



Note: The total number of degrees conferred was 5,592.
Source: IBRC, using data from the Indiana Commission for Higher Education

Of the 5,293 doctoral degrees granted by all Indiana public universities, IU Bloomington granted more than a third. Other Indiana University campuses conferred 4.4 percent of these degrees. However, Figure 12 shows that Purdue University–West Lafayette conferred the largest number of doctoral degrees—almost half of those by state universities. Ball State University and Indiana State University represented just over one-tenth.

Figure 12: Doctoral Degrees Conferred by Indiana Public Universities, 2002-2007



Note: The total number of degrees conferred was 5,293.
Source: IBRC, using data from the Indiana Commission for Higher Education

Expected Lifetime Earnings

Indiana University provides an education that not only enriches its graduates intellectually, but also financially. By granting baccalaureate, master's, professional and doctoral degrees in diverse fields, IU allows Indiana residents the opportunity to greatly enhance their career options and wage-earning

potential beyond what they may have earned with merely an associate's degree or less. Here we consider the increased lifetime earnings for female and male graduates completing the most popular degrees on the IU Bloomington campus. Lifetime earnings are estimated synthetically by summing the average wages for different age cohorts of full-time, year-round workers for each degree level and field.[3]

Table 6 shows that a recent female IU Bloomington baccalaureate graduate is expected to earn $1.2 million dollars from employment over the course of her lifetime. While the most popular degree field—education—is associated with lifetime earnings of under $1 million, most graduates earn substantially more, even without completing an additional graduate degree. In particular, the almost 400 students who receive business administration and management degrees each year are projected to make lifetime earnings exceeding $1.3 million.

Table 6: Estimated Lifetime Earnings for Female Baccalaureate Degree Graduates, IU Bloomington, 2002-2007

Field of Study	Average Annual Number of Graduates (2002-2007)	Lifetime Earnings per Person (in thousands)
Education (except Administrative and Math & Science Education)	691	$964
Social Sciences (except Economics)	449	1,182
Business Administration and Management	398	1,347
Arts and Humanities (except Music, Visual & Performing Arts)	346	1,303
Communications	184	1,329
Biological, Agricultural & Food Sciences	182	1,263
Journalism	170	1,278
Drama / Fine, Visual & Performing Arts	157	1,222
Public and Educational Administration and Management	138	1,173
Social Work	110	979
Other Fields	407	1,268
Overall	3,231	$1,192

Note: Numbers may not sum due to rounding. Journalism graduates have been assigned the average lifetime earnings for all fields. Lifetime earnings are synthetic estimates based on average wages for graduates by age, degree level and field. Figures have been adjusted to 2006 dollars and future earnings have been discounted at 3 percent.

Source: IBRC, using data from the Indiana Commission for Higher Education and the National Survey of College Graduates

Female graduates who earn advanced degrees at IU Bloomington typically earn more than $1.5 million from employment over their lifetimes. Popular master's degrees in education and business

[3] For more detail, please read the methodology section of the main report.

administration and management can earn graduates $1.2 million and $1.8 million, respectively. Doctoral degree graduates in the most popular education field potentially earn $1.5 million over the life course. Highest of all are professional degree graduates who have lifetime earning potentials above $2.4 million.

Table 7: Estimated Lifetime Earnings for Female Advanced Degree Graduates, IU Bloomington, 2002-2007

Degree Type	Field of Study	Average Annual Number of Graduates (2002-2007)	Lifetime Earnings per Person (in thousands)
Master's	Education (except Administrative and Math & Science Education)	217	$1,242
Master's	Business Administration and Management	102	1,848
Master's	Library Science	94	1,150
Master's	Arts and Humanities (except Music, Visual & Performing Arts)	82	1,201
Master's	Music	78	1,164
Master's	Other Fields	321	1,491
Professional	Law/Legal Studies	89	2,453
Professional	Medicine/Dentistry/Optometry*	42	2,759
Doctoral	Education (except Administrative and Math & Science Education)	49	1,538
Doctoral	Social Sciences (except Economics)	29	1,610
Doctoral	Arts and Humanities (except Music, Visual & Performing Arts)	28	1,246
Doctoral	Music	13	1,711
Doctoral	Mathematics and Physical Sciences	12	2,003
Doctoral	Other Fields	44	1,805
Overall		1,200	$1,542

* IU Bloomington offers optometry degrees within the broader Medicine/Dentistry/Optometry field.
Note: Numbers may not sum due to rounding. Lifetime earnings are synthetic estimates based on average wages for graduates by age, degree level and field. Figures have been adjusted to 2006 dollars and future earnings have been discounted at 3 percent.

Source: IBRC, using data from the Indiana Commission for Higher Education and the National Survey of College Graduates

Meanwhile, men who recently completed baccalaureate degrees are expected to earn $1.6 million dollars in lifetime earnings from employment (see Table 8). The most popular degree field (business administration and management) is associated with lifetime earnings of $1.9 million, even if these graduates do not complete an additional advanced degree. Other popular degree fields are the arts and humanities, as well as education, and these fields allow graduates lifetime earnings surpassing $1.5 million and $1.2 million, respectively.

Table 8: Estimated Lifetime Earnings for Male Baccalaureate Degree Graduates, IU Bloomington, 2002-2007

Field of Study	Average Annual Number of Graduates (2002-2007)	Lifetime Earnings per Person (in thousands)
Business Administration and Management	803	$1,902
Arts and Humanities (except Music, Visual & Performing Arts)	326	1,553
Education (except Administrative and Math & Science Education)	313	1,250
Public and Educational Administration and Management	288	1,689
Social Sciences (except Economics)	285	1,757
Biological, Agricultural & Food Sciences	163	1,549
Communications	118	1,539
Computer and Information Science (not programming)	106	1,965
Criminal Justice/Protective Services	79	1,435
Drama / Fine, Visual & Performing Arts	67	1,405
Other Fields	310	1,649
Overall	2,861	$1,670

Note: Numbers may not sum due to rounding. Lifetime earnings are synthetic estimates based on average wages for graduates by age, degree level and field. Figures have been adjusted to 2006 dollars and future earnings have been discounted at 3 percent.

Source: IBRC, using data from the Indiana Commission for Higher Education and the National Survey of College Graduates

Male graduates who earn advanced degrees at IU Bloomington typically earn over $2 million from employment over their lifetimes (see Table 9) and the 264 graduates of the most popular master's degree field (business administration and management) can earn $2.4 million. Doctoral degree graduates in the most popular arts and humanities field potentially earn $1.5 million over the life course and earning even more are doctoral graduates in mathematics and the physical sciences ($2.3 million). Highest of all are professional degree graduates who have lifetime earning potentials above $2.9 million.

Table 9: Estimated Lifetime Earnings for Male Advanced Degree Graduates, IU Bloomington, 2002-2007

Degree Type	Field of Study	Average Annual Number of Graduates (2002-2007)	Lifetime Earnings per Person (in thousands)
Master's	Business Administration and Management	264	$2,420
Master's	Education (except Administrative and Math & Science Education)	116	1,367
Master's	Music	67	1,058
Master's	Public and Educational Administration and Management	62	1,634
Master's	Arts and Humanities (except Music, Visual & Performing Arts)	61	1,264
Master's	Other Fields	263	1,778
Professional	Law/Legal Studies	121	2,903
Professional	Medicine/Dentistry/Optometry*	31	3,488
Doctoral	Arts and Humanities (except Music, Visual & Performing Arts)	36	1,573
Doctoral	Education (except Administrative and Math & Science Education)	30	1,691
Doctoral	Mathematics and Physical Sciences	29	2,327
Doctoral	Social Sciences (except Economics)	27	1,910
Doctoral	Music	22	2,211
Doctoral	Other Fields	59	2,209
Overall		1,187	$2,002

Note: Numbers may not sum due to rounding. IU Bloomington offers optometry degrees within the broader Medicine/Dentistry/Optometry field. Doctoral graduates in music have been assigned the average lifetime earnings for all doctoral fields. Lifetime earnings are synthetic estimates based on average wages for graduates by age, degree level and field. Figures have been adjusted to 2006 dollars and future earnings have been discounted at 3 percent.

Source: IBRC, using data from the Indiana Commission for Higher Education and the National Survey of College Graduates

The value of obtaining a four-year college degree or higher is underscored when one compares the difference between the estimated lifetime earnings of IU Bloomington's baccalaureate and advanced degree graduates with the earnings of associate's degree graduates nationwide (see Table 10). Over the life course, IU Bloomington's female graduates are expected to make $304,000 (or 32 percent) more than associate's degree graduates. Male graduates are expected to make $489,000 (or 38 percent) more than associate's degree graduates.

Table 10: Difference in Lifetime Earnings between IU Bloomington Graduates (Baccalaureate Degree or Higher) and U.S. Associate's Degree Graduates

Category	Women ($1000s)	Men ($1000s)
Average Lifetime Earnings for IU Bloomington Alumni (2002-2007) with Baccalaureate Degrees or Higher	$1,287	$1,767
Average Lifetime Earnings for U.S. Associate's Degree Graduates	$983	$1,278
Additional Lifetime Earnings Attributable to Higher Degree	$304	$489

Note: Numbers may not sum due to rounding. Lifetime earnings are synthetic estimates based on average wages for graduates by age, degree level and field. Figures have been adjusted to 2006 dollars and future earnings have been discounted at 3 percent.

Source: IBRC, using data from the Indiana Commission for Higher Education, National Survey of College Graduates and the U.S. Census Bureau

Combining the additional earnings of baccalaureate and advanced degree graduates of IU Bloomington (compared to holders of associate's degrees) leads to an estimated $3.3 billion increase in lifetime earnings related to degrees conferred annually. Of course, not all of this remains in Indiana, and it can't properly be considered an economic impact of the campus in the traditional sense. Nonetheless, the figure does convey a sense of the incremental value placed on the education received by graduates of IU Bloomington.

Adding to Indiana's Talent Pool

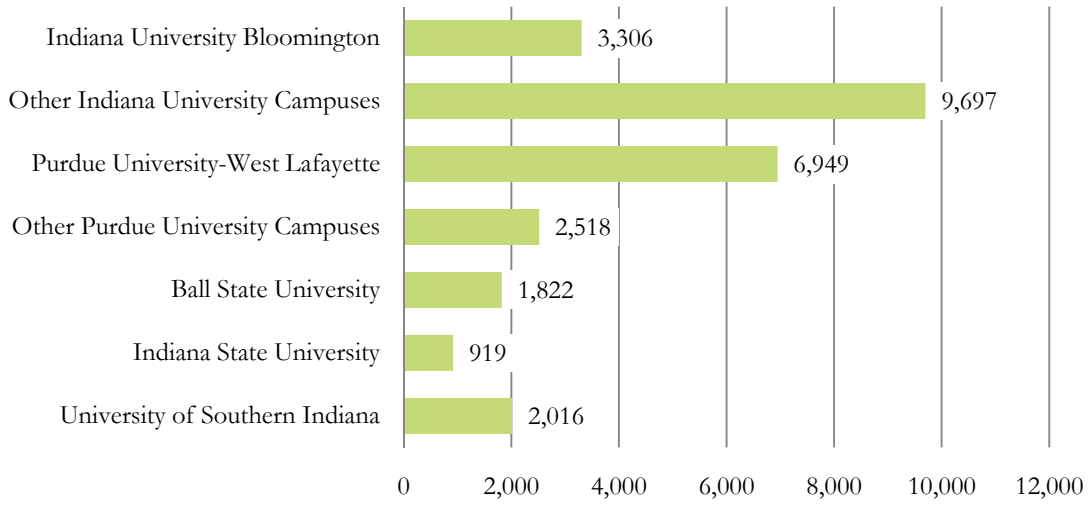
Indiana University plays a vital role to the state's economic development efforts by training future leaders and practitioners with skills that are closely aligned with major industries. This report focuses on the high-paying life sciences industry—key among Indiana's industrial initiatives—since the state is among the "nation's top four life sciences leaders" due to its high number and concentration of life sciences–related jobs.[4]

Life Sciences

IU Bloomington produced 3,306 life sciences degree graduates for the academic years 2002-2007 (see Figure 13), behind Purdue University–West Lafayette (6,949) and IUPUI (6,478). All told, the IU system graduates 13,003 life sciences degrees or almost half of these degrees among Indiana's four-year public universities, ahead of Purdue University (9,467 or 35 percent) and the other institutions (Ball State University, Indiana State University and the University of Southern Indiana) that make up the remaining 17 percent of these degrees.

[4] This information comes from the Indiana Economic Development Corporation: www.in.gov/iedc/industry.htm

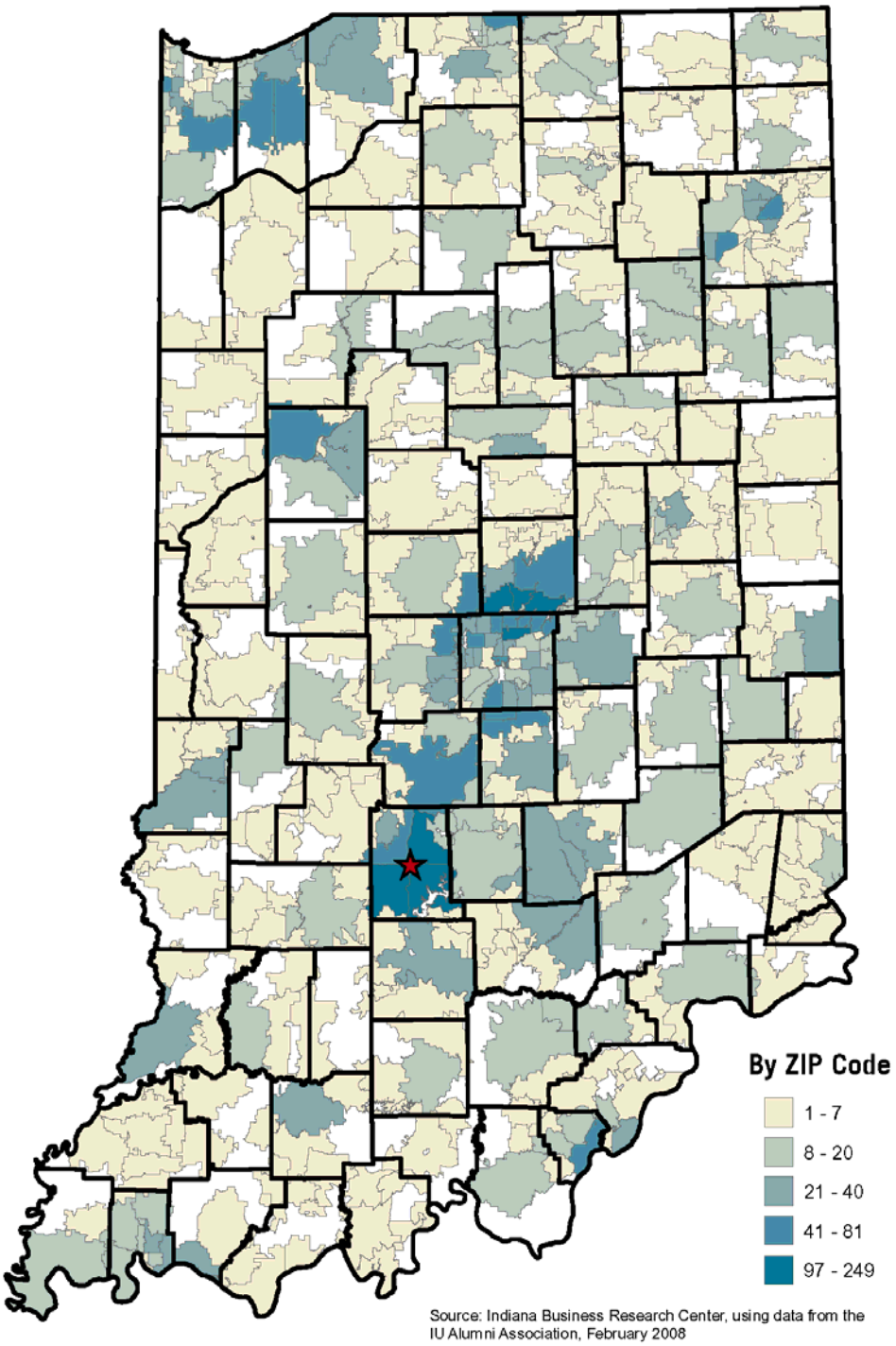
Figure 13: Life Sciences Degrees Conferred by Selected Indiana Public Universities, 2002-2007



Note: The total number of life sciences degrees conferred equal 27,227.
Source: IBRC, using data from the Indiana Commission for Higher Education.

Sixty-two percent of IU Bloomington's life sciences alumni do not currently live within Indiana. Figure 14 shows the settlement of life sciences alumni who live in the state, based on Alumni Association records.

Figure 14: Residence of IU Bloomington Alumni with Life Sciences Degrees, 2008



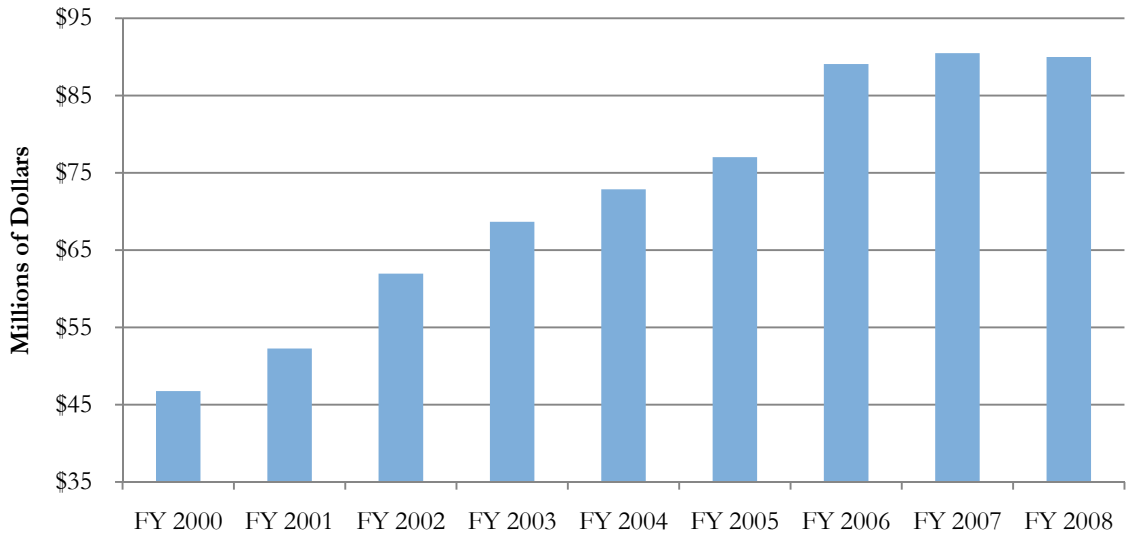
University Research and Business Development

Major research universities like IU draw several hundred million dollars annually from external sources, including the federal government, private foundations, nonprofit organizations and corporations. As the IU system's flagship, the Bloomington campus commands a large share of the total sponsored research funding (35 percent of the total between 2006 and 2008). This funding supports cutting-edge faculty research that employs professional and support staff as well as students and creates a demand for goods and services in the local economy.

Research Inputs

IU Bloomington's sponsored research expenditures totaled $90 million in fiscal year 2008. This amount has grown at an 8.5 percent average annual rate and is nearly twice as large as expenditures in 2000 (see Figure 15). The campus's full-time faculty has grown from 1,618 to 1,943 over this same period. Yet even when research expenditures are examined on a dollar per full-time faculty basis, this increase remains substantial. Research expenditures averaged $46,318 per full-time faculty member in 2008 compared to $28,898 in 2000—a 6.1 percent average annual rate of growth. The 2000 figure for research expenditures per faculty member becomes $36,715 when presented in 2008 dollars (using the Consumer Price Index) and brings the inflation-adjusted average annual growth rate to 2.9 percent.

Figure 15: Annual IU Bloomington Sponsored Research Expenditures, 2000-2008



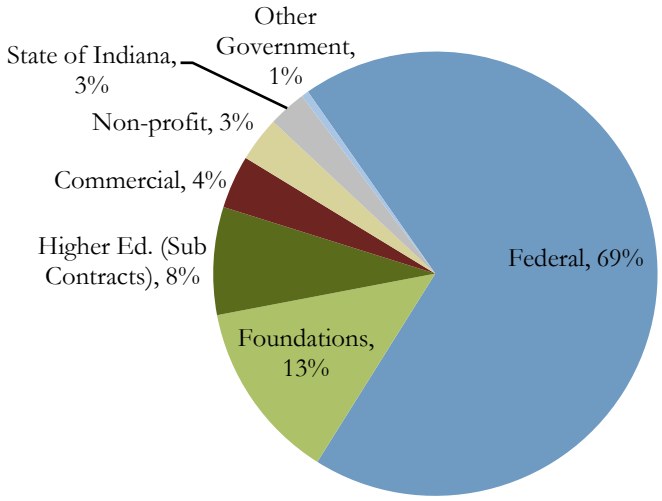
Source: IBRC, using the Executive Reporting Environment (ERE) of the Indiana University Office of Research Administration

Sixty-nine percent of IU Bloomington's sponsored research expenditures between 2006 and 2008 were supported by the federal government (see Figure 16). Eighty percent of this federal funding

originated with two agencies: the National Institutes of Health (43 percent) and the National Science Foundation (36 percent).

Beyond federal contracts and grants, private foundations were the largest sponsors of research accounting for 13 percent of expenditures. Sub-contracts from other colleges and universities represented 8 percent of research expenditures followed by businesses at 4 percent. Only 3 percent of IU Bloomington's sponsored research expenditures were funded by the State of Indiana.

Figure 16: Sponsored Research Expenditures by Funding Source, IU Bloomington, Three-Year Average for FY 2006-2008



Source: IBRC, using the Executive Reporting Environment (ERE) of the Indiana University Office of Research Administration

Research Outputs

Some research efforts at the Bloomington campus have commercial applications that create income for the university and, in some cases, result in start-up companies that create new jobs. Table 11 details some key metrics of IU Bloomington's technology transfer. The campus has had a spike in invention disclosures in the last two years; however, license agreements on inventions are down slightly. Furthermore, research at the Bloomington campus resulted in 28 patents issued between fiscal years 2004 and 2007.

Table 11: Technology Transfer Outputs of IU Bloomington Research, FY 2004-2007

	FY 2004	FY 2005	FY 2006	FY 2007
New Invention Disclosures	33	42	57	56
New Licenses	33	32	25	22
Total New Patent Applications	31	17	29	36
Total New Patents Issued	5	8	9	6

Source: Indiana University Research and Technology Corporation

Since 1999, licensed IU technologies have generated three start-up businesses in the Bloomington area. WisdomTools, for instance, was established in 1999 and is a pioneer in computer-based e-learning technologies. SGC Technologies began operations in 2006 and provides Internet-based file-sharing services. The latest start-up, Spherosense Technologies, is developing research instrumentation and medical diagnostic equipment that can be utilized in the life sciences industry. While the creation of start-ups is merely one small byproduct of the primary mission of university research, these businesses provide tangible examples of the impact that IU research has on the local economy.

Civic Contribution

Service-Learning

The IU Bloomington campus provides several diverse programs that give students the opportunity to engage the Bloomington community while completing for-credit coursework. As a general rule, these opportunities are not centrally coordinated and a detailed accounting of participation is not available. Two programs are notable exceptions to this rule and do track participation, namely, the School of Public and Environmental Affairs (SPEA) and the Leadership, Ethics and Social Action (LESA) minor.

- **School of Public and Environmental Affairs:**[5] All students at SPEA must complete a minimum of 120 contact hours through nonprofit or public internships to fulfill their degree requirements. During the past five years, a substantial number of these internships consisted of unpaid volunteer service to Indiana communities–80 internships by graduate students and 203 internships by undergraduates totaling over 63,000 hours.
- **Leadership, Ethics, and Social Action (LESA) minor:**[6] The Bloomington campus offers this interdisciplinary undergraduate minor in which students can apply what they learn about civic engagement. While students can take a range of courses to complete this minor, two key courses that require service-learning are "L105: Beyond the Sample Gates" and "L405: Capstone Seminar." In L105, students experience how volunteering can address social

[5] Information on hours of service is from IU Bloomington, School of Public & Environmental Affairs, Office of Career Services, courtesy of Raymond Clere.
[6] Data on number of students and hours of service come from Ms. Joelene Bergonzi, assistant director of the LESA program. Course information comes from the LESA website: www.indiana.edu/~lesa/courses.html.

problems. Every year, at least 40 students enroll in this course and each one completes a minimum of 25 community service hours per semester. Every fall, roughly 12 advanced students enroll in L405, which typically requires them to serve 10 hours per week in the fall semester for a total of 1,440 hours of community service.

Table 12 summarizes a conservative estimate of the number of hours and types of service for IU Bloomington students during the 2006-2007 school year. All told, these activities amounted to over 25,000 hours of service with estimated benefits of over $101,000.[7]

Table 12: Economic Benefits of Service-Learning, IU Bloomington, 2006-2007

School/Department (Volunteer Role)	Estimated Hours	Equivalent Hourly Compensation	Equivalent Annual Compensation
Anthropology	8	$9.52	$76
Apparel Merchandising and Interior Design	50	9.52	476
Biology	114	9.52	1,085
Business	228	9.52	2,170
Chemistry (child tutoring)	422	10.43	4,401
Criminal Justice (child mentoring)	300	12.63	3,788
Education	38	9.52	362
Education (child mentoring)	24	12.63	303
Folk	56	9.52	533
French & Italian (child tutoring)	344	10.43	3,588
Health, Physical Education, and Recreation	1,088	9.52	10,357
Health, Physical Education, and Recreation, Graduate Program	64	16.12	1,031
Honors Program	1,915	9.52	18,230
Informatics	64	9.52	609
Journalism	154	9.52	1,466
Leadership, Ethics and Social Action	2,680	9.52	25,512
Nursing (health volunteer)	196	11.22	2,199
Political Science	12	9.52	114
Psychology	240	9.52	2,285
Public and Environmental Affairs	840	9.52	7,996
Public and Environmental Affairs (fundraising)	312	11.82	3,686
Public and Environmental Affairs, Graduate Program	1,696	16.12	27,331
Religious Studies	48	9.52	457
Social Work (counseling)	1,043	12.63	13,171

[7] This impact assumes a 0.73 factor of proportionality between market price of service and client value. Please see the methodology section for more information.

School/Department (Volunteer Role)	Estimated Hours	Equivalent Hourly Compensation	Equivalent Annual Compensation
Sociology	768	9.52	7,311
Total	12,704		$138,540
Price-to-Client Value Ratio			73%
Economic Benefit of Service-Learning			$101,134

Note: Numbers may not sum due to rounding. Equivalent hourly compensation is based on wages and benefits of similar occupations and the overall economic impact assumes a 0.73 market price-to-client value ratio. Please see the methodology section for details.

Source: IBRC, using enrollment data and course descriptions from the Indiana University Office of the Registrar and wage data from the U.S. Bureau of Labor Statistics

In addition to service-learning opportunities at IU Bloomington, students take part in unpaid internships that are valuable to organizations in Indiana. In particular, the School of Public and Environmental Affairs records the internship hours of its students for a wide range of services summarized in Table 13.

Table 13: Economic Benefits of School of Public and Environmental Affairs Unpaid Internships, IU Bloomington, 2006-2007

School/Department (Service Role)	Recorded Hours	Equivalent Hourly Compensation	Annual Equivalent Compensation
Undergraduate Internships			
Administration	2,245	$14.31	$32,116
Office Assistance	2,304	12.10	27,874
Research	891	17.31	15,425
Neighborhood Sanitation	602	10.54	6,345
Awareness Campaigning	225	8.56	1,924
Fundraising Face-to-Face	211	8.56	1,803
Fundraising by Telephone	83	11.82	986
Media	67	13.05	870
Adult Mentoring/Counseling	58	12.63	727
Child Mentoring/Counseling	31	12.63	397
Other	2,166	9.52	20,616
Graduate Internships			
Research	1,254	$17.31	$21,697
Office Assistance	927	15.67	14,528
Administration	608	21.42	13,033
Adult Mentoring/Counseling	121	12.63	1,534
Fundraising Face-to-Face	169	8.56	1,448

School/Department (Service Role)	Recorded Hours	Equivalent Hourly Compensation	Annual Equivalent Compensation
Fundraising by Telephone	117	11.82	1,387
Awareness Campaigning	157	8.56	1,346
Child Mentoring/Counseling	106	12.63	1,334
Neighborhood Sanitation	87	10.57	920
Child Tutoring	30	10.43	311
Media	22	13.05	282
Other	205	16.12	3,307
Total	12,687		$170,209
Price-to-Client Value Ratio			73%
Economic Benefit of Unpaid Internships			$124,253

Note: Numbers may not sum due to rounding. Equivalent hourly compensation is based on wages and benefits of similar occupations and the overall economic impact assumes a 0.73 market price-to-client value ratio. Please see the methodology section for details.

Source: IBRC, using internship data from IU Bloomington, School of Public & Environmental Affairs, Office of Career Services and wage data from the U.S. Bureau of Labor Statistics

Volunteering

Perhaps no locality depends on the volunteer service of its local Indiana University students as much as Monroe County.[8] Major community organizations such as the Boys & Girls Club; Girls, Inc.; the Wonderlab (an interactive children's science museum); and Middle Way House (a women's domestic violence shelter) rely heavily on IU volunteers.[9] Additionally, the volunteer recruiter for the City of Bloomington Department of Parks and Recreation estimates that 85 percent of the total 10,577 volunteer hours tracked by the city comes from volunteers affiliated with Indiana University.[10]

Some major civic engagement resources at IU Bloomington include the following:

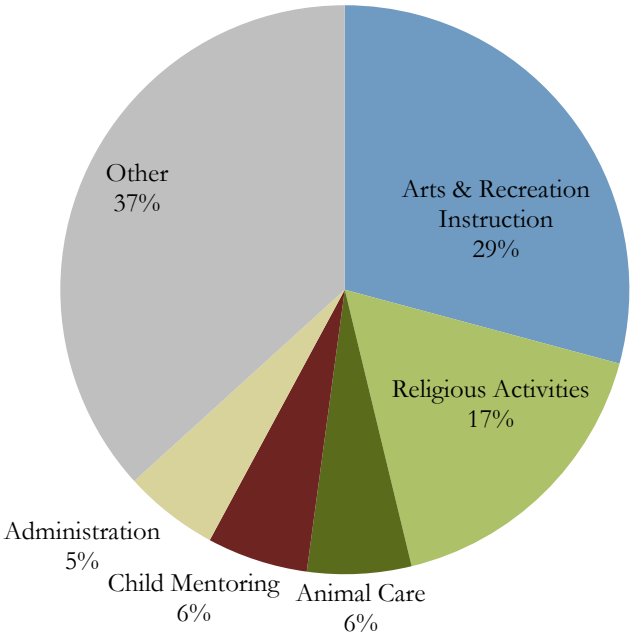
- African American Arts Institute
- Center on Congress at Indiana University
- Community Legal Clinic
- Community Outreach & Partnerships in Service-Learning
- Institute on Disability and Community
- IU School of Public and Environmental Affairs
- Kelley School of Business, Civic Leadership Development
- National Center on Accessibility
- Students Organized Against Poverty (SOAP)

[8] In contrast to the rest of the report that uses the entire state as the campus region, the applicable campus region for the volunteering section for IU Bloomington is simply Monroe County.
[9] This information comes courtesy of Elizabeth Savich, director of the City of Bloomington Volunteer Network
[10] Information courtesy of Kim Ecenbarger, City of Bloomington Department of Parks & Recreation

- United Way Campaign
- Volunteer Students Bureau
- WFIU Radio
- WTIU Television

IU Bloomington students volunteered an average of 50 hours over the 2006-2007 academic year according to the IU Student Survey of full-time students. Figure 17 illustrates the most popular volunteer activities for these full-time students.[11] IU Bloomington is one of only two IU campuses where religious activities was not the most popular volunteer category. Instead, arts and recreation instruction was the most popular form of service, followed by religious activities and animal care.

Figure 17: Volunteer Time Spent by Activity, IU Bloomington Students, 2006-2007



Source: IBRC, using volunteer data from the IU Student Survey 2008

After extrapolating the student survey results to the entire full-time student body, IU Bloomington student service amounted to over 1.7 million volunteer hours. This service was conducted overwhelmingly within Monroe County (with the exception of camp volunteering). Table 14 summarizes the volunteer services of IU Bloomington students and estimates that this service amounts to a net economic benefit of $9.7 million to the Monroe County community.[12]

[11] Full-time students were analyzed and reported because they more likely reflect volunteering that would not have occurred "but for" the presence of the university. In addition, this also implies that the economic benefit figures for volunteering are conservative.
[12] This study accounts for the possibility that not all services provided by volunteers would be funded if the organization, or the organization's clients, had to pay fair market value. The literature on volunteering suggests using a 0.73 factor of proportionality between market price of service and client value. Please see the methodology in the full IU Impact Study for more information.

Table 14: Economic Benefit of Student Volunteering Activities, IU Bloomington, 2006-2007

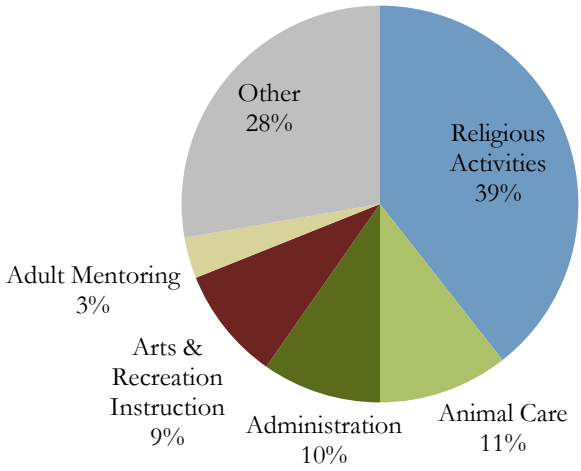
Volunteer Role	Total Annual Hours	Percent of Hours in Campus Region	Equivalent Hourly Compensation	Equivalent Annual Compensation
Arts & Recreation Instruction	504,168	82.3	$9.74	$4,038,847
Religious Activities	294,398	75.0	11.97	2,641,973
All Other Activity	178,898	79.3	9.52	1,351,162
Administration	92,975	90.0	14.31	1,197,129
Child Mentoring	99,092	86.5	12.63	1,082,635
General Office Assistance	78,871	83.9	12.10	800,209
Animal Care	102,258	77.8	9.22	733,035
Media	39,651	90.3	13.05	467,468
Child Tutoring	56,346	71.7	10.43	421,583
Adult Tutoring	29,145	80.0	17.11	398,966
School Volunteering	57,786	64.8	10.43	390,466
Adult Mentoring	29,792	88.9	14.35	380,016
Poverty Relief	46,596	85.1	9.22	365,411
Camp Volunteering	49,222	45.0	9.74	215,656
Campaigning	26,482	89.7	8.56	203,304
Neighborhood Cleanup/ Housing Development	24,107	79.5	10.54	202,058
Hospital Activities	17,919	55.2	12.78	126,356
Total	1,727,706			$15,016,275
Percent of Students Not from Campus Region				88.51%
Price-to-Client Value Ratio				73%
Overall Economic Benefit of Student Volunteering				$9,702,360

Note: Numbers may not sum due to rounding. Equivalent hourly compensation is based on wages and benefits of similar occupations. The overall economic impact accounts only for students who did not previously reside in the campus region and assumes a 0.73 market price-to-client value ratio. Table reports full-time students. The number of full-time students in fall of 2007 was 34,326. Please see the methodology section for details.

Source: IBRC, using volunteer data from the IU Student Survey 2008, student origin data from the Indiana University Office of University Planning, Institutional Research and Accountability and wage data from the U.S. Bureau of Labor Statistics

The IU Faculty and Staff survey conducted in early 2008 revealed that the survey participants volunteered an average of 44 hours over the 2006-2007 academic year. Figure 18 shows the most popular volunteer activities among IU Bloomington employees. While religious activities were by far the most popular, a substantial number of volunteer service hours were for animal care, administration (including board membership) and arts and recreation instruction.

Figure 18: Volunteer Time Spent by Activity, IU Bloomington Faculty and Staff, 2006-2007



Source: IBRC, using volunteer data from the IU Faculty and Staff Survey 2008

After extrapolating the faculty and staff survey results to all full-time employees, IU Bloomington employee volunteer service totaled over 311,000 hours within Monroe County. Table 15 summarizes the hours of volunteer service estimated for IU Bloomington employees. Taking a conservative approach, IBRC analysis assumed that "but for" the presence of the university, the faculty would not live and work in Bloomington and as a result, would not volunteer in Monroe County. While this is likely true of professional staff as well, the university employee data did not allow breaking out professional staff from other staff for whom the "but for" argument would not hold. (The survey revealed that a majority of staff were not as economically tied to the university as were the faculty.) As a result, the conservative estimate of net economic benefits counts only faculty and those benefits total $577,000 in Monroe County. The upper bound of the estimate, on the other hand, includes all full-time employees and totals $2.9 million.

Table 15: Economic Benefit of Employee Volunteering Activities, IU Bloomington, 2006-2007

Volunteer Role	Total Annual Hours	Percent of Hours in Campus Region	Equivalent Hourly Compensation	Equivalent Annual Compensation
Religious Activities	122,789	80.4	$11.97	$1,181,867
All Other Activity	46,444	83.0	9.52	366,771
Administration	30,300	81.3	14.31	352,424
Animal Care	32,981	83.9	9.22	254,968
Arts & Recreation Instruction	28,710	87.1	9.74	243,383
Adult Mentoring	10,440	87.9	14.35	131,684
School Volunteering	9,017	87.9	10.43	82,653
Poverty Relief	8,420	88.9	9.22	68,953

Volunteer Role	Total Annual Hours	Percent of Hours in Campus Region	Equivalent Hourly Compensation	Equivalent Annual Compensation
General Office Assistance	6,388	88.6	12.10	68,447
Child Mentoring	5,901	80.5	12.63	59,997
Child Tutoring	3,526	80.0	10.43	29,423
Media	1,493	100.0	13.05	19,476
Campaigning	1,964	93.7	8.56	15,741
Neighborhood Cleanup/ Housing Development	1,281	91.6	10.54	12,358
Hospital Activities	981	83.9	12.78	10,513
Camp Volunteering	681	74.3	9.74	4,923
Adult Tutoring	263	92.9	17.11	4,173
Total	311,578			$2,907,755
Employees Who Are Faculty				27.2%
Price-to-Client Value Ratio				73%
Overall Economic Benefit of Employee Volunteering				$577,314

Note: Numbers may not sum due to rounding. Equivalent hourly compensation is based on wages and benefits of similar occupations. The overall economic impact accounts only for faculty and assumes a 0.73 market price-to-client value ratio. Table reports full-time employees. In the fall of 2007, the number of full-time faculty and staff was 7,144. Please see the methodology section for details.

Source: IBRC, using volunteer data from the IU Faculty and Staff Survey 2008, student origin data from the Indiana University Office of University Planning, Institutional Research and Accountability and wage data from the U.S. Bureau of Labor Statistics

Charitable Contributions

IU Bloomington also "gives back" to the state and campus regions through charitable donations. Table 16 reports the findings of the IU Student Survey in terms of charitable giving for IU Bloomington. Based on the survey, full-time students gave an average annual donation of $54 over the 2006-2007 academic year. Extrapolating the survey average to the entire full-time student body, students at IU Bloomington gave nearly $1.9 million. Fifty-seven percent of these funds—over a million dollars—were received by organizations within Monroe County.

Table 16: Economic Benefit of Student Charitable Contributions, IU Bloomington, 2006-2007

Region of Charitable Giving	Percentage of Total	Contribution per Person
Inside Monroe County	57.4%	$31
Other Parts of Indiana	17.1%	$9
Outside of Indiana	25.5%	$14

Region of Charitable Giving	Percentage of Total	Contribution per Person
Total Contribution per Person		$54
Total Contribution of All Students		$1,866,530
Contribution within Campus Region		$1,071,388

Note: Table reports full-time students.
Source: IBRC, using charitable contribution data from the IU Student Survey 2008

Full-time employees have more resources than the average student and can be even more generous. Based on the IU Faculty and Staff Survey, full-time employees contributed an average of $667 during the 2006-2007 academic year. Multiplying this average by the number of faculty and staff, IU Bloomington employees gave over $4.7 million. Table 17 shows that the majority of these funds were donated to local organizations. The impact in Monroe County was over $3 million.

Table 17: Economic Benefit of Employee Charitable Contributions, IU Bloomington, 2006-2007

Region of Charitable Giving	Percentage of Total	Contribution per Person
Inside Monroe County	64.3%	$429
Other Parts of Indiana	16.5%	$110
Outside of Indiana	19.2%	$128
Total Contribution per Person		$667
Total Contribution of All Employees		$4,764,386
Contribution within Campus Region		$3,061,594

Note: Table reports full-time employees.
Source: IBRC, using charitable contribution data from the IU Faculty and Staff Survey 2008

Resources for the Community

Members of the public are welcome to use numerous facilities and resources on the IU Bloomington campus.

Arts and Culture

Among numerous art and cultural resources available at IU Bloomington, the Jacobs School of Music offers more than 1,100 performances every year, most of which are free and open to the public. The Bloomington campus also contains IU Auditorium, which has hosted a wide range of top international performers since it opened in 1941. Table 18 lists just some of the many resources available to the public.

Table 18: Arts and Culture Resources Available at IU Bloomington

Resource	Music & Performing Arts	Fine & Visual Arts	Film	Popular Media
African American Arts Institute	x			
Art Museum		x		
Ballet Theater, IU	x			
Brown County Playhouse	x			
City Lights Film Series			x	
Department of Theatre & Drama	x			
Indiana Memorial Union	x		x	
Indiana Review				x
IU Auditorium	x			
Jacobs School of Music	x			
Kinsey Institute		x		
Mathers Museum of World Cultures		x		
Musical Arts Center	x			
Opera Theater, IU	x			
Ryder Film Series and Magazine			x	x
School of Fine Arts Gallery		x		
Stone Age Institute, The		x		
Theatre and Drama, Department of	x			
Union Board Films		x		
WFIU Radio				x
WTIU Television				x
Wylie House Museum		x		

Source: IBRC, using information compiled from IU Campus Events listings at: www.indiana.edu/arts/

Library Services

Boasting one of the largest collections in North America and membership in a large global inter-library network, IU Bloomington's system of 27 libraries and research archives is a tremendous resource for students, faculty, staff and community members. Nearly 3,000 members of the public used the IU Bloomington libraries during the 2006-2007 academic year. Community members borrowed 16,302 books for a benefit valued at nearly $121,000. IBRC analysts used the estimated value of $7.42 per loaned book based on the methodology used in the report, *The Economic Impact of Libraries in Indiana.*[13] In addition, the general public can use the library's audiovisual resources and computer services by requesting a free network ID.

[13] Indiana Business Research Center. 2007. "The Economic Impact of Libraries in Indiana." Available online at: www.ibrc.indiana.edu/studies/EconomicImpactOfLibraries_2007.pdf

Other Resources

Table 19 catalogs six types of resources available to members of the public.

Table 19: Community Resources Offered by IU Bloomington

Community Resource	Adult/ Continuing Education	K-12 Education Resources	Economic Development/ Business Leadership	Physical & Mental Health Treatment	Event Hosting/ Shopping Facilities	Recreation Facilities & Sporting Events
Atwater Eye Care Center				x		
BloomingKids! (College Mentors for Kids, Inc.)		x				
Bloomington Division of Continuing Studies	x		x			
Bradford Woods - Indiana University's Outdoor Center		x				x
Center for Human Growth				x		
Clearinghouse on Reading, English and Communication		x				
College Audition Preparation	x	x				
Community Eye Care Center				x		
Community Outreach & Partnerships in Service-Learning	x	x				
Department of Theatre & Drama		x				
GROUPS Student Support Services		x				
Hearing Clinic				x		
High School Journalism Institute		x				
Honors Program in Foreign Languages for High School Students		x				
Indiana Business Research Center			x			
Indiana Genomics Initiative			x	x		
Indiana Memorial Union					x	x
Indiana University Golf Course						x
Indiana University Outdoor Adventures						x
Indiana University Surplus Stores					x	

Community Resource	Adult/ Continuing Education	K-12 Education Resources	Economic Development/ Business Leadership	Physical & Mental Health Treatment	Event Hosting/ Shopping Facilities	Recreation Facilities & Sporting Events
Intercollegiate Athletics - *Hoosiers*		x				x
International Studies Summer Institute for High School Students		x				
Inventure (Bloomington Technology Incubator)			x			
IU Research Park			x			
Jacobs School of Music		x				
Kinsey Institute for Research in Sex, Gender and Reproduction				x		
Kirkwood Observatory	x	x				
Midsummer Theatre Program		x				
Midwest Proton Radiotherapy Institute				x		
National Center on Accessibility			x			
OPEN Program		x				
Outdoor Pool						x
School of Health, Physical Education and Recreation						x
Science Outreach Programs		X				
Speech and Language Clinic				x		
Student Recreational Sports Center						x
Summer Pre-College Programs		X				
University Information Technology Services	x					

Note: This list does not include civic engagement or arts and cultural resources discussed earlier in the report.
Source: IBRC, with input from campus administrators

The Economic Footprint of the University

Methodology

The Indiana Business Research Center analyzed the significance of IU Bloomington on the state's economy. The analysis measures the economic effect of IU compensation and purchasing expenditures, together with the spending of students and visitors that the institution attracts. The IBRC used the IMPLAN economic analysis tool, developed by University of Minnesota researchers over 20 years ago and in use by over 1,500 clients today. It is a standard input-output model that calculates the economic ripple effects created by the purchases of the university, the compensation of its faculty and staff, and the collateral expenditures of students and the visitors attending IU-related events. Users of the model's results should be aware that the figures are estimates, not a precise accounting, of the effects of IU Bloomington on the Indiana economy.

Principal Findings

- The total economic footprint of IU Bloomington on the state of Indiana amounts to $1.9 billion annually.
- This economic activity generates approximately $85 million in state and local taxes.
- Student spending and its ripple effect are estimated to total $350 million and account for approximately 2,760 jobs.

IU Bloomington faculty and staff spending, together with university direct purchases and construction projects, result in ripple effects of approximately $350 million in additional economic activity and account for approximately 3,480 jobs.

Table 20 presents the relative economic effects of five major spending categories and their ripple effects. The ratio of the ripple effect to the direct effect depends on several factors, but two important factors are the size of the model region—the larger, the greater the ripple effects—and the degree to which the region is able to supply the goods and services demanded by the consumers and businesses of the region. The economic footprint measures the economic activity associated with monetary injections, monetary retention and monetary recirculation. If state appropriations—neutral, recirculation monetary flows—are removed, then the economic impact totals just over $1.5 billion.[14]

[14] See the methodology section of the full report for a detailed discussion on the conceptual difference between economic impact and economic footprint.

Table 20: Estimated Economic Footprint of IU Bloomington, 2006-2007

Economic Output Effects of University	Direct Effects (in millions)	Ripple Effects (in millions)	Total Footprint (in millions)
Faculty and Staff Compensation	$579.2	$240.9	$820.1
University Purchases of Goods and Services	286.7	80.3	367.0
University Construction	54.2	29.8	84.0
Student Expenditures	409	177.0	586.1
Visitor Expenditures Attributed to IU Events	3.0	1.9	4.9
TOTAL Effect on Economic Output	$1,332.1	$529.9	$ 1,862.1

Source: IBRC, using IMPLAN results based on IPEDS financial data reported by universities to the National Center for Education Statistics, Office of Financial Aid, IU Student Survey 2008, Office of Planning, Institutional Research and Accountability

Table 21 presents the employment impact of IU Bloomington. In addition to the 7,325 people employed by IU Bloomington,[15] the spending by university faculty, staff and students, together with university purchasing, accounts for another 11,561 jobs statewide. The reader should be aware that the types of jobs, and their associated wages and salaries, do not all have the same ripple effects. While the model estimates that IU Bloomington creates demand for higher-paying jobs like physicians to serve faculty and staff, a majority of jobs are in the lower-paying service sector.

Table 21: Estimated Employment Footprint of IU Bloomington, 2006-2007

Employment Effects of University	Direct Effects	Ripple Effects	Total Footprint
Faculty and Staff	3,150	1,700	4,850
University Purchases of Goods and Services	1,080	810	1,890
University Construction	340	250	590
Student Expenditures	2,670	1,490	4,160
Visitor Expenditures Attributed to IU Events	55	16	71
TOTAL Effect on Employment	7,295	4,266	11,561

Source: IBRC, using IMPLAN model results

Economic Injections and Leakages

In many ways, measuring the economic impact of a business or institution is an exercise in keeping track of good money (monetary flows into a region), bad money (monetary flows out of a region) and neutral money (transactions that re-circulate money within a region). Another way to view good money is as an injection into a region's economy. Tourism is the classic example. Another way to view bad money is a leakage from a regional economy. Purchasing oil from overseas may be a good example of this concept. The presence of a business or institution that helps to stop leakages, or retain economic activity, is said to have an import substitution effect.

[15] Based on IBRC's full-time equivalent calculations using payroll data received from the Office of Planning, Institutional Research and Accountability.

In recent years, state universities—in their desire to advance their case for support to state legislatures—have highlighted the fact that universities and students attract visitors and those visitors bring money, good money, to their region. In this way, institutions have augmented their reported economic footprint. While there is nothing analytically wrong with counting the economic injections, if one adds these injections, one must also subtract the leakages from the region to obtain a net flow of good versus bad money. Most university impact reports do not subtract leakages.

In an attempt to conduct a balanced and consistent analysis of injections and leakages associated with student visitors, the IBRC included questions in the 2008 Student Survey to measure the frequency and spending associated with travelers from out of state and student travel to destinations out of the state. According to the survey results, IU Bloomington students travel out of state longer and spend more in the process than those who come to Bloomington to visit IU students. In other words, this is not an advantageous calculation.

On the other hand, out-of-state visitors who attend sporting events, cultural events or attend conferences do provide injections to the state economy. These visitors, and their economic injections, are enumerated in the "visitor expenditures attributed to IU events" category. Because these visitors are not tied to students, their spending is assumed to be net injections. That said, the percentage of those visitors coming from out of state—the model region—is small.

Following the lead of the economic impact study conducted for the Jacob's School of Music in 2007, the research team assumed that 17 percent of visitors who attend all types of events—cultural, sporting or otherwise—were from outside the campus region. The 17 percent figure was used for all campus regions for the sake of consistency. (The assumption is probably the most heroic for the Bloomington campus because the state of Indiana is the campus region.) Each out-of-region visitor is assumed to spend on average $44 per visitor day (in 2008 dollars) on hotels, meals and shopping. Event tickets and refreshment sales, as well as payments for conference meals and lodging, are included in the university "auxiliary enterprise" expenditures; as a result, including them in the visitor-day spending total would be double counting.

As one can see in Table 20 and Table 21, the portion of the economic footprint associated with university events is relatively small compared to the university's operating budget and student spending on housing, foods and incidentals. Just the same, this is an important expenditure category and future university impact studies would be well served to have more accurate and detailed data on how many event attendees originate from outside the region as well as how much an event attendee spends locally on lodging, meals and shopping.

Explaining the Data and the Results

In this report, the term "ripple effects" is used to describe the cascading effects of a purchase by either institutions (such as a university or business) or consumers in a regional or state economy. A purchase at a retail store by a consumer, for example, is the end of a chain of economic transactions. Working backward, a purchase of a gallon of milk at the local grocery store provides some income to the grocery worker and some profit to the store owner. If the milk was produced locally, it also provides income to the dairy farmer, the local large-animal veterinarian and a local agricultural supply store, to name a few. Those incomes are re-circulated in the local economy as those people spend their income on auto repair, groceries or home repair. Hence, that $5 for the gallon of milk

can be multiplied to $7.50 or $8.00 depending on how much of the money is retained and re-spent locally.

The entire state of Indiana is the campus region for the IU Bloomington campus. Thus, the economic effects were measured for the state as a whole, in contrast to measuring the impact of IU Bloomington on Monroe County alone. As stated in the full IU Impact Report, the IBRC researchers attempted to rigorously apply the "but for" principle as expounded by Siegfried, Sanderson and McHenry.[16] The research team assumed, because of IU Bloomington's role as the doctoral-intensive flagship state university, that the state would not only lose those out-of-state students and their spending, but also those in-state students who would otherwise attend a university in another state. As a result, "but for" IU Bloomington's existence, all of the economic impact of the university would be lost to the state, with the exception of state appropriations.

The treatment of state support is a thorny issue in measuring economic impact. The most conservative approach would be to remove the of state appropriation portion from the IU operating budget because these funds would either be returned to Indiana taxpayers or redirected to other state programs and projects. In other words, the state support wouldn't disappear if IU went away; it would go somewhere else in the state economy, in contrast to the research and development funding, the student tuition and endowment revenues. The IBRC analysts have kept all funds in the calculation and note that these state appropriations are "neutral;" that is, they don't represent injections into the state economy nor do they represent leakages, or potential leakages, from the state economy. As a result, the IBRC uses the term economic footprint to include all categories of monetary flows—injections, retention and recirculation. Economic *impact*, on the other hand, would measure only the effects of monetary injections and retention.

The sum of all the direct effects will not add up to the IU Bloomington total operating budget as reported by the Integrated Postsecondary Education Data System (IPEDS). There are several reasons for this:

1. To assess the effects of spending by faculty and staff, the analyst must reduce total compensation to reflect the leakages associated with income taxes, payroll taxes and savings.
2. Scholarships and student financial assistance are a reduction in revenues, even though they are treated as an expense in the university books.
3. The IMPLAN model calculates the effects of current spending, not the consumption of fixed capital, i.e., depreciation.
4. Construction expenditures can vary greatly over time. As a result, a five-year average of construction expenditures was used.

There was no double counting of student spending for on-campus housing and meals. Student expenditures for on-campus housing and meals are captured within university expenditures. For the relevant number of students, on-campus room and board spending was removed from the impact calculation of student spending.

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[16] John A. Siegfried, Allen R. Sanderson, Peter McHenry. "The economic impact of colleges and universities," *Economics of Education Review* 26 (2007): 546–558.

Conclusion

IU Bloomington makes a vital contribution to Indiana. This study presents a comprehensive, innovative and conservative assessment of the economic impact that IU Bloomington has on its region. IBRC researchers used many of the standard tools and methods to measure IU Bloomington's impact, the economic effects of which are clear. Through the spending of 7,325 full-time employees and purchases of goods and services, IU Bloomington creates economic ripples through the state. This analysis estimated that the direct and ripple effects of university expenditures accounts for $1.9 billion of the state's economic activity.

Students, faculty and staff also "give back" to the community by volunteering and contributing to local charities. This study is one of few that chronicles and measures the economic benefits of the community and civic engagement. Information related to IU Bloomington's civic engagement was gathered through an extensive student and staff survey that collected data on a range of topics including spending patterns, volunteer activities and charitable contributions. The civic engagement dollar figure, which totals approximately $10.5 million, was estimated by applying to total service learning and volunteer hours the equivalent wages of occupations performing similar roles.

Assigning a dollar value to a university is a challenging task. Many university impact studies have overestimated the economic impact and overlooked, or underestimated, the other types of economic and cultural contributions that the institution makes to the region it serves. Clearly, the total dollars-and-cents contribution of IU Bloomington as reported in this study is but one dimension of IU Bloomington's total impact. This study attempted to provide a balanced view by expanding the scope and understanding of the contributions—tangible economic contributions as well as intangible contributions—that a university makes.