FAITH, SCHOLARSHIP AND ENGAGEMENT: THE UNIVERSITY OF NOTRE DAME AS AN ECONOMIC ENGINE

FINAL REPORT – August 9, 2018

FINAL REPORT SUBMITTED TO:
University of Notre Dame
Notre Dame, IN 46556



FINAL REPORT SUBMITTED BY:
Econsult Solutions, Inc.
1435 Walnut Street, 4th Floor
Philadelphia, PA 19102



TABLE OF CONTENTS

Table of Contents ii
Executive Summary iv
1.0 Introduction 1
1.1 Purpose of Report 1
1.2 About The University of Notre Dame 1
1.3 Notre Dame as a Regional Economic Engine 2
1.4 Notre Dame as a Values-Driven Institution 3
1.5 Methodology Overview 4
1.6 Structure of Report 7
1.7 Recurring Themes 8
2.0 Impact from Annual Operations 10
2.1 Section Overview 10
2.2 Components of Operations 10
2.3 Direct Economic Footprint 12
2.4 Economic Impact from Operations 12
2.5 Industry Distribution of Economic Impact from Operations 13
2.6 Tax Revenue Impact from Operations 14
2.7 Why Impact from Annual Operations Matters 15
3.0 Community Engagement and Local Impact 17
3.1 Section Overview 17
3.2 Mission in Action 18
3.3 Localized Economic Impact 19
3.4 Notre Dame's Municipal Infrastructure 23
3.5 The Campus as a Local Amenity 25
3.6 Community Engagement and Investment 28
3.7 Sports Programming in the Community 35
3.8 Catholic Values in Action: Volunteerism and Service Learning 36
3.9 Scholarship and Financial Aid to Local Residents 40
3.10 Why Community Engagement and Local Impact Matter 41
4.0 Scholarship, Research, and Innovation 42
4.1 Section Overview 42
4.2 The Role of Research Universities to Regional Competitiveness 43
4.3 The Importance of Access and Diversity to Creating an Inclusive and Innovative Intellectual Community 43
4.4 Research Footprint 46
4.5 Notre Dame's Research and Innovation Ecosystem 51
4.6 Intellectual Property Output 52
4.7 Commercialization and Entrepreneurial Successses 53
4.8 A Virtuous Cycle of Innovation 56
5.0 Impact from Wage Premium 58

5.1 Section Overview 58
5.2 Concept behind Wage Premium 58
5.3 Direct Wage Premium 59
5.4 Economic Impact from Wage Premium 61
5.5 Industry Distribution of Economic Impact from Wage Premium 62
5.6 Tax Revenue Impact from Wage Premium 62
5.7 The Notre Dame Diaspora 63
5.8 Why Impact from Wage Premium Matters 65

6.0 Impact from Student, Visitor, and Retiree Spending 67

6.1 Section Overview 67
6.2 Student Spending 68
6.3 Visitor Spending 70
6.4 Economic Impact from Student and Visitor Spending 73
6.5 Industry Distribution of Economic Impact from Student and Visitor Spending . 75
6.6 Tax Revenue Impact from Student and Visitor Spending 75
6.7 Retiree Spending 76
6.8 Why Impact from Student and Visitor Spending Matters 78

7.0 Impact from Event Participant Spending 80

7.1 Section Overview 80
7.2 The Economic Ramifications of the University as Host to Large-Scale Events .. 80
7.3 Notre Dame Athletics Events and Their Visitors' Spending 81
7.4 Other Large Scale Events and Their Visitors' Spending 86
7.5 Economic Impact from Large-Scale Event Participant Spending 88
7.6 Industry Distribution of Economic Impact from Event Participant/Visitor Spending 89
7.7 Tax Revenue Impact from Event Participant/Visitor Spending 90
7.8 Why Impact from Event Participant/Spectator Spending Matters 91

8.0 Impact from Capital Investments 93

8.1 Section Overview 93
8.2 Projects and Spending 94
8.3 Economic Impact from Capital Investments 98
8.4 Industry Distribution of Economic Impact from Capital Investments 99
8.5 Tax Revenue Impact from Capital Investments 100
8.6 Why Impact from Capital Investments Matters 101

9.0 Conclusion 102

9.1 Aggregate Economic Impact 102
9.2 Why This Matters 104

Appendix A – Report Methodology A-1
Appendix B – Direct Economic Activity Detail A-3
Appendix C – Economic and Fiscal Impact Models A-28
Appendix D – About Econsult Solutions, Inc. (ESI) A-31

EXECUTIVE SUMMARY

The University of Notre Dame is a premier institution of higher education located in South Bend, Indiana. At the core of Notre Dame's identity is its Catholic character, which shapes the University's educational mission and its commitment to local service and regional engagement. The purpose of this report is to express these characteristics in economic and social impact terms.

This report finds that the sum of Notre Dame's annual economic impact – through its operations and capital investments; additional spending by its students, visitors, and event attendees; and increased household income earned by its graduates – is **$2.46 billion within the three county South Bend-Elkhart region, supporting 16,700 jobs and generating $52 million in state tax revenues**. Almost 80 percent of the economic impact and jobs supported are in South Bend.

As an institution of higher education that is grounded in Catholic tradition, Notre Dame's impacts are values driven, with an emphasis on the broader commitment to local, regional, and global engagement. That commitment has been crystallized in the strategic plan set forth by Father John Jenkins, the 17th President of the University, with a concentration on Catholic Character, undergraduate education, scholarship, stewardship, and external collaborations. Notre Dame's far-reaching societal and community impact all connect back to these faith-based values.



University of Notre Dame: Total Annual Impact

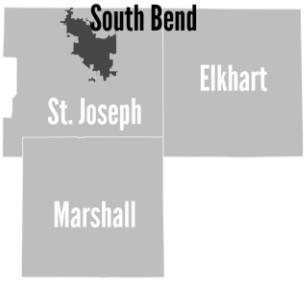
ECONOMIC IMPACT

UNIVERSITY OF NOTRE DAME

JOBS SUPPORTED

Three County Region
$2.5 billion

South Bend
$2.0 billion



Three County Region
16,700 jobs

South Bend
12,900 jobs

Annual Economic Impact by Category

OPERATIONS



Three County Region
$ 1.6 billion

South Bend
$1.4 billion

CAPITAL



Three County Region
$453 million

South Bend
$355 million

STUDENT & VISITOR SPENDING



Three County Region
$92 million

South Bend
$62 million

EVENT SPECTATOR SPENDING



Three County Region
$256 million

South Bend
$153 million

WAGE PREMIUM



Three County Region
$67 million

South Bend
$37 million

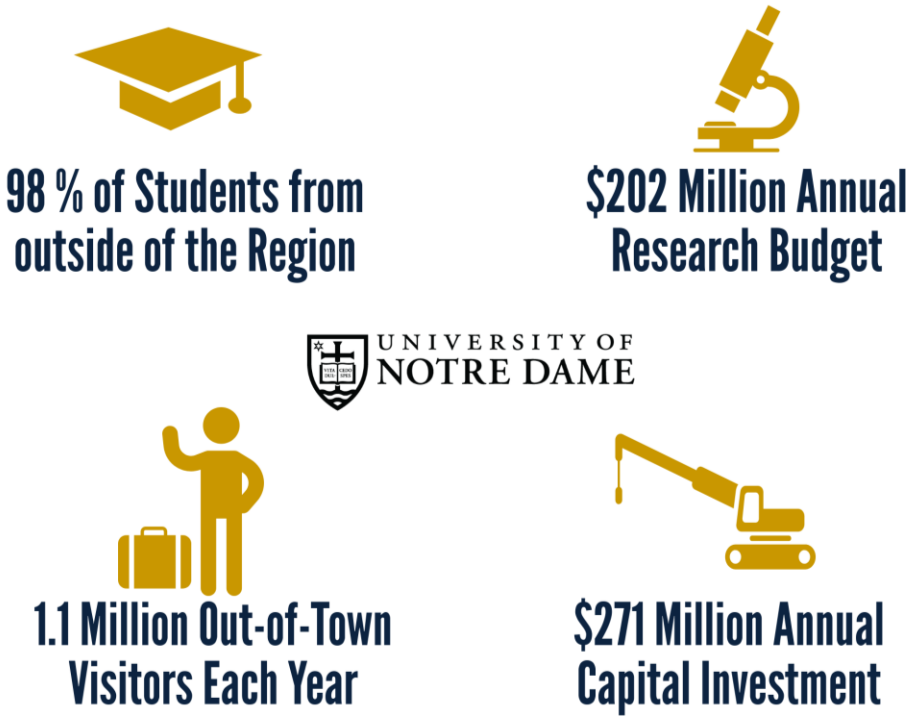
Annual Fiscal Impact



STATE OF INDIANA
$52 million



Notre Dame is a top-ranked university that **draws a significant amount of dollars – tuition, research grants, visitor spending, and alumni donations – from outside the region**. These dollars support local jobs and local tax bases, and Notre Dame works closely with a number of local and regional partners to maximize the positive commercial impact and minimize the cost burden of all of this economic activity.



Notre Dame's Catholic character informs its **investment in and engagement with the local community**. It is a provider of many public services, its campus is an amenity to the entire region, and its ethos of service and collaboration is reflected in numerous community-serving efforts, including service learning initiatives, social justice programming, and sports camps.



As a perennial football powerhouse with a spirited alumni base, **Notre Dame generates a significant amount of commercial activity on game days**. In 2017, its seven home dates are estimated to have brought 660,000 visitors to the region, producing $185 million in economic impact for the region. Whether communicating with football fans or families of students, Notre Dame markets the entire region and its network of hotels, restaurants, and tourist attractions, and in turn regional promotional agencies include Notre Dame's events and amenities in their sales efforts.



Notre Dame's Catholic character also informs its **investment in research.** Under the leadership of President John I. Jenkins, the research program has grown significantly in the past decade and focuses its efforts on human advancement. Notre Dame's annual research program was $202 million in 2016, supporting a regional ecosystem of scientific discoveries, commercialization events, and entrepreneurial partnerships with the private sector.



"We must bring the highest levels of education, research and discussion to bear on making our common home – our world, our nations and our cities – sustainable communities where all can find a home and happiness."

Father John I. Jenkins, C.S.C.
President of the University of Notre Dame

Higher education is undergoing increased scrutiny as its value proposition is challenged by students and their families, local communities, and government entities alike. Yet higher education has never been more important to economic competitiveness and to a just society. This report demonstrates the significant impact Notre Dame produces as **an institution whose Catholic character informs its commitment to scholarship and service**. Locally, regionally, and societally, Notre Dame is making a deep impact through faith, scholarship, and engagement.

1.0 INTRODUCTION

1.1 PURPOSE OF REPORT

The University of Notre Dame is a premier private teaching and research institution of higher education located in the South Bend-Elkhart County region of Indiana. It is a top-ranked university, dedicated to scholarship, service, and community. At the core of Notre Dame's identity is its Catholic character, which shapes all aspects of the University's educational mission and its commitment to building a strong local and regional community.

The purpose of this report is to express these unique characteristics in economic and social impact terms, as well as to identify and, where possible, quantify those impacts locally, regionally, and statewide. Broadly speaking, higher education is undergoing a period of disruption and increased scrutiny regarding the value of a college degree and the overall return on investment that these institutions yield in their local communities. At the same time, higher education has never been more important to economic competitiveness, both regionally and nationally, and as a leader in building a just society. This report demonstrates the significant value proposition Notre Dame confers upon its community, region, and society, as an institution whose Catholic character informs its commitment to excellent scholarship and to community engagement.

This report will estimate the impact of Notre Dame's annual operations, its capital investments, the student and visitor spending it attracts, and the additional earnings potential it confers on its graduates. In addition to these economic benefits, the report will also highlight key areas of distinction, including but not limited to its local engagement, scholarship, innovative research, and entrepreneurship successes. These points of pride represent unique ways in which it both achieves those economic impacts and produces broader gains to society as a whole.

1.2 ABOUT THE UNIVERSITY OF NOTRE DAME



Founded in 1842 under the direction of **Father Edward F. Sorin**, a priest of the French missionary order known as the Congregation of Holy Cross, Notre Dame was established with the aim of being one of America's foremost Catholic universities. Chartered by the State of Indiana in 1844, the University was run by Holy Cross priests until 1967, when leadership was transferred to a two-tiered, mixed board of lay and religious trustees and fellows. Faithful to Father Sorin's vision, Notre Dame is committed to unifying the pursuit of moral values,

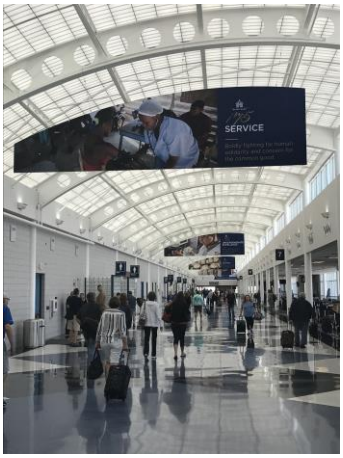
intellectual skills and scientific knowledge in the context of a Catholic religious tradition.

Today, Notre Dame has grown to become a diverse community of more than 12,000 students, 1,600 faculty and 4,300 staff, committed to producing the next generation of leaders devoted to making a positive difference to society. The University offers 75 undergraduate degree programs, 79 Master's and professional degree programs, and 52 Doctoral degree programs, including several combined degrees. Connected to Notre Dame's core mission of Catholic scholarship, the University continues to expand its research footprint, cultivating a community of research, scholarship, and spiritual and entrepreneurial endeavors throughout campus and the region.

1.3 NOTRE DAME AS A REGIONAL ECONOMIC ENGINE

Although they are tax-exempt entities committed to academic and social missions, world-class institutions of higher education with strong religious character such as Notre Dame are increasingly understood to be important parts of a region's future competitiveness, drivers of economic growth, and large-scale producers of local and state tax revenues. This is in part because their size and scope create a large economic footprint that benefits the local, regional, and state economy, and this is true of Notre Dame, which is a major employer in South Bend and in St. Joseph County.

Notre Dame is a regional economic engine not only because of its sheer scale. The University produces an outsized positive economic impact on the local, regional, and state economy for a number of additional reasons:



- First and foremost, **the University works in partnership with public and private sector entities throughout the region to enhance the region's quality of life and economic vitality**. As a large anchor institution, it understands that it is a major driver in the success of the immediate neighborhood and broader region it inhabits. In turn, the University's success depends in large part on the vibrancy and productivity of the surrounding community and institutions. Given this shared commitment to a specific place and to ensuring the future success of that place, Notre Dame collaborates with local governments, region-serving not-for-profits, and the business community in areas of mutual interest and mutual gain, such as community revitalization, tourism promotion, research and commercialization, and business formation.

- **Notre Dame is a net talent attractor for the state**, in that a greater proportion of its alumni stay in state than the proportion of incoming students who are from the state. This creates a virtuous cycle, as a critical mass of employers seeking talent desire to be near Notre Dame, thus increasing the attractiveness for graduates to stay local. As regions

compete in large part on the ability to grow, retain, and connect human capital, the presence of large-scale academic institutions that draw in students from all over the world and that then retain a higher proportion of graduates is a huge plus. Notre Dame works closely with public and private sector partners to attract and retain talent locally, with significant positive implications for the competitiveness of the region as a whole.

- As a world-class academic institution, Notre Dame draws students, faculty, staff, and visitors from all over the world to its campus. This not only marshals a significant amount of intellectual capital to solve pressing local and global challenges, but also **draws in outside spending** to support a wide range of vendors throughout the region in key quality-of-life sectors such as tourism, food, professional services, and construction. Furthermore, Notre Dame's athletic and other events draw millions of people to the area every year, and it works with regional tourism promotion agencies and industry groups to promote the region and its attractions, and to maximize the economic impact this outside spending will have on the region's hotels, restaurants, and retail centers.

- Notre Dame's annual operating budget exceeds $1 billion. This represents a significant amount of employment opportunity for households in the region and a significant amount of procurement opportunity for vendors throughout the state. Notre Dame also initiates hundreds of millions of dollars in capital projects every year – new buildings, major renovations, and large-scale maintenance efforts – which not only enhance the physical campus where all of its work takes place but also provide economic opportunities for the region's construction industry and related sectors.

1.4 NOTRE DAME AS A VALUES-DRIVEN INSTITUTION

Notre Dame is not only a regional economic engine but also one whose values produce and transcend that economic impact. At Notre Dame, mission drives action. Under the leadership of Father John I. Jenkins, the 17th President of Notre Dame, "mission" was most recently defined in 2012 at the launch of an institution-wide strategic plan that reaffirmed Notre Dame's role as a values-led institution:



- Ensure that our **Catholic character** informs all our endeavors;

- Offer an unsurpassed **undergraduate education** that nurtures the formation of mind, body, and spirit;

- Advance human understanding through **scholarship, research, and post-baccalaureate programs** that seek to heal, unify, and enlighten;

- Foster the University's mission through superb **stewardship** of its human, physical, and financial resources;

- Engage in external **collaborations** that extend and deepen Notre Dame's impact.

The actions Notre Dame has undertaken to fulfill this mission are what have produced the significant economic impact that is the subject of this report. Said another way, Notre Dame could not have achieved the economic impact it has achieved without hewing closely to these values. Therefore, while Notre Dame, which is a place of academics and scholarship and research, should also be known as a local, regional, and statewide economic engine, the University's economic role cannot be untangled from the core tenets it pursues as a Catholic institution.

1.5 METHODOLOGY OVERVIEW

Econsult Solutions, Inc. (ESI) employs industry-standard economic modeling techniques to estimate direct economic activity generated by Notre Dame and to translate that activity into total economic output, employment, and earnings, as well as tax revenue impact. The appendices to this report describe in detail the approach and methodology utilized.

Notre Dame provided data inputs on institutional activity, which were verified and supplemented with other public data sources and assumptions as needed. For each input, the most recent and appropriate available dataset is utilized (often but not always from FY 2017). In the case of capital investments, activity levels are averaged over multiple years to generate an appropriate assessment of typical annual activity. Therefore, the analysis should be understood to represent the current annualized level of activity for Notre Dame, rather than representing the impact for any specific fiscal year.[1]

Economic impacts are the sum of direct activity attributable to Notre Dame (either direct spending by the institution on operations and capital activity, spending by students and visitors it attracts, or spending by alumni attributable to the enhanced earning power conferred by their degrees) and the spillover impacts of that direct activity.[2] Within an interconnected economy, each dollar of direct expenditures generates multiple waves of spillover impacts through spending on goods and services purchased within a given region ("indirect impacts") as well as spending resulting from the labor income generated by the initial activity that ripples through the region ("induced

[1] Appendix A provides further detail on the data collection process, approach, and scope of this analysis.
[2] Appendix B provides a detailed description of the methodology utilized to define the direct activity attributable to Notre Dame in each of these categories.

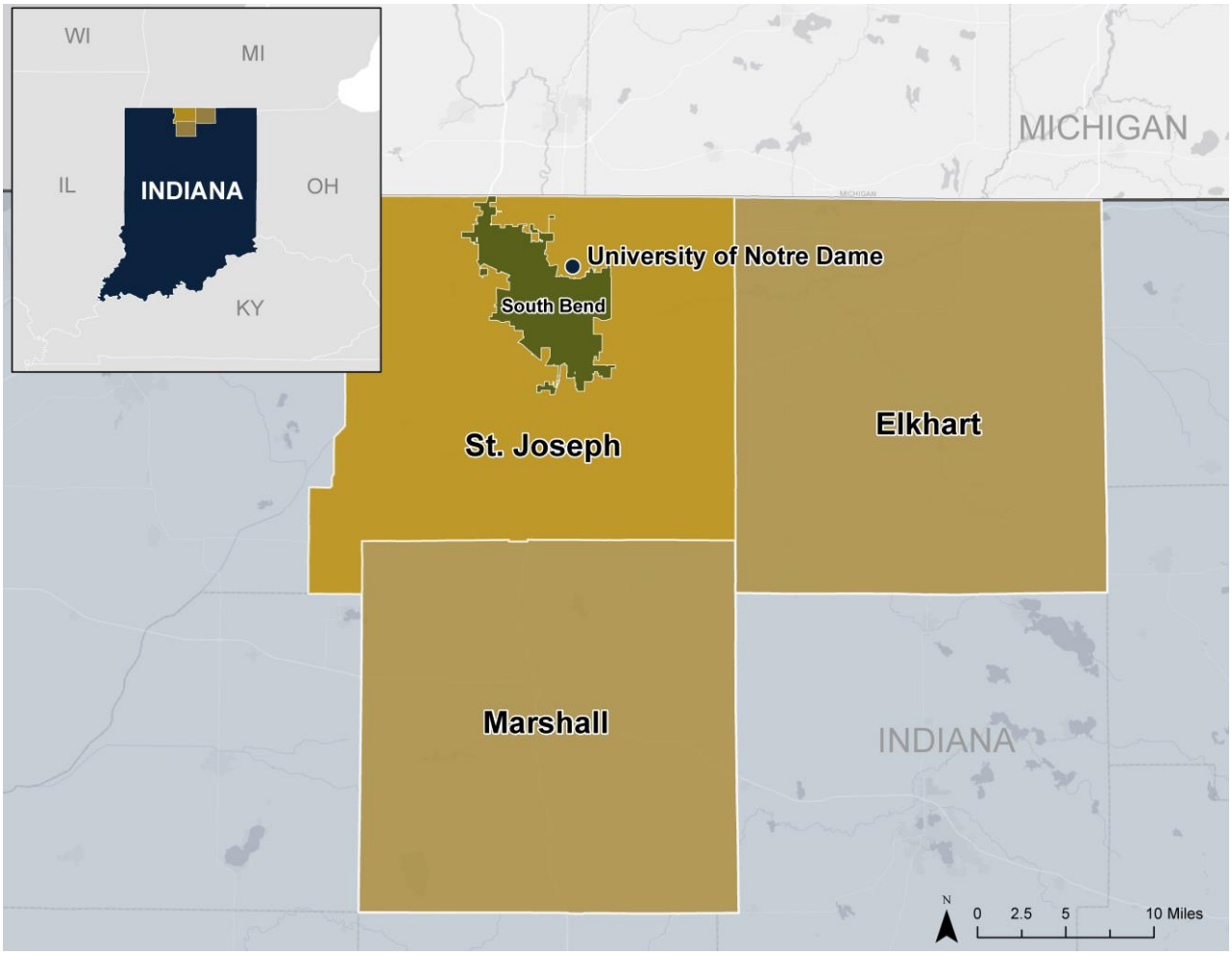
impacts"). ESI uses IMPLAN modeling software to estimate indirect and induced impacts, and sums them with the direct activity to produce total economic impacts.[3]

Economic impacts in this report are calculated at four concentric geographic levels (See Figure 1.1):

- Notre Dame's campus + City of South Bend: this geography is chosen to capture the direct activity that occurs on campus, which is adjacent to the City of South Bend, as well as the direct, indirect, and induced impacts that occur in and spill over into the South Bend economy. Throughout the report, "ND + SB" is used in the tables as shorthand for this geography.
- St. Joseph County
- The South Bend-Elkhart Region: This geography is chosen to reflect the increasingly collaborative nature of the three counties in close proximity to Notre Dame. Those counties include St. Joseph County, Marshall County, and Elkhart County.
- The State of Indiana

[3] Appendix C provides a detailed description of the economic modeling approach utilized.

FIGURE 1.1 - GEOGRAPHIES OF INTEREST



Source: Notre Dame (2017)

Tax revenue impacts are modeled for the City of South Bend and the State of Indiana governments.[4] Importantly, while the city economy is wholly contained within the state economy, the City of South Bend and the State of Indiana are separate and distinct government entities, with separate and distinct tax bases. Therefore, the fiscal impacts for the City and State are additive.[5]

[4] Appendix C provides a detailed description of the fiscal modeling approach utilized.
[5] Note that the Notre Dame footprint may produce other taxes for other jurisdictions, but it would likely be small in magnitude and is therefore excluded from this analysis.

1.6 STRUCTURE OF REPORT

The chapters in this report are sequenced to highlight the interconnectivity of Notre Dame's economic and social impact work.

The first content section quantifies the economic impact of the **annual operations** of Notre Dame (Section 2), which represents a significant amount of direct employment and direct spending on a variety of goods and services. This spending, in turn, supports additional spillover impacts throughout the City of South Bend, St. Joseph County, the three county region, and State of Indiana.

The subsequent three sections explore Notre Dame's broadening **engagement with the South Bend-Elkhart region and beyond.** Although Notre Dame's community and social impacts are a function of the University's large operational footprint, which enables its students, faculty, and staff to participate meaningfully in their communities, it is Notre Dame's values-driven mission of education and service that motivates the campus to collaborative action.

Section 3 describes the significant presence of Notre Dame in the region, its commitment to **serving and engaging surrounding communities**, and how that commitment represents a meaningful set of benefits. Local hiring and sourcing, public services rendered, stewardship of arts and culture treasures, environmentally sustainable practices, and community service initiatives are all significant components of Notre Dame's economic and social impact footprint and an important way in which it practices leadership and enriches its immediate surroundings.

Notre Dame's reputation as a preeminent institution of higher education, with a breadth of **scholarly pursuits, research activities, and innovation-focused initiatives**, is the topic of Section 4. The University's leadership in scholarship is centered in its emphasis on inclusion and access, which promotes a diverse community of scholars who build on Catholic traditions of academic excellence and the pursuit of knowledge. This welcoming intellectual community enables greater research discoveries and the commercial technologies that they generate. Notre Dame's unique position as a collaborator with statewide research partners and as a convener of regional partners to leverage these resources results in a stronger innovation economy within the South Bend-Elkhart region.

Notre Dame's Catholic character and educational mission creates a rigorous and open learning environment that then sends forth graduates to do well *and* do good. One tangible consequence of that work is that **alumni retained in the region have higher earning potential**, which translates into more household earnings circulating in the local and state economy. This is known as the wage premium (Section 5), and Notre Dame graduates in the region contribute significantly to the local and state economy as a result.

Notre Dame's **students and visitors** are also responsible for generating economic impact. The University's global footprint means that it draws students and their visitors from across the United States and the world. Their spending represents additional dollars circulating in the regional

economy, supporting a wide range of businesses and industries (Section 6). Furthermore, Notre Dame's reputation as not only a destination for athletics fans, but also as a venue for arts and culture, conferences, and other large scale events draws even more visitors to the region. Section 7 describes the impact of those events, the participants and their spending.

The final economic impact examined is from the **capital investments** made by the University on its campus. Notre Dame's substantial development program includes new buildings, renovations, and large-scale repairs, which reaffirms the University's commitment to creating a place for Catholic scholarship and research and also creates a campus that is a welcoming amenity to the regional community (Section 8).

The report concludes (Section 9) with **a summation of Notre Dame's economic impact**, which is the aggregation of its impact from operations (Section 2), wage premium to local alumni (Section 5), visitor spending (Sections 6 and 7), and capital investments (Section 8). It also synthesizes how the many economic and social impact categories reviewed in this report together cement Notre Dame's role as a collaborative partner with the South Bend-Elkhart region and the State of Indiana in building a strong, innovative economy.

1.7 RECURRING THEMES

Three key themes are woven throughout the report, with stories that are demonstrative of Notre Dame's core values. Those themes are **Catholic Character**, **Scholarship**, and **Engagement**. These themes often intersect one another in variety of ways, as the University's mission and goals are to address each of these principles; however, the examples highlighted throughout the report aim to simply draw out how Notre Dame's values are brought to life in numerous ways both on campus and throughout the South Bend-Elkhart region. Visually, these themes will be highlighted throughout the report as shown below.

Catholic Character



As a Catholic university, Notre Dame combines a living faith that seeks understanding with an uncompromising commitment to the search for truth through teaching and inquiry. It believes faith and reason are not only compatible, but even complementary. The University endeavors to build a community that teaches respect, love, and service so that learning serves the Church and the world.

Scholarship



Researchers at Notre Dame advance human understanding through research, scholarship and creative endeavor in order to be a repository for knowledge and a powerful means for doing good in the world. By harnessing discoveries for service to the world, Notre Dame is determined to deepen human understanding of God and creation and serving the global community.

Engagement



Notre Dame's drive to collaborate more widely in the world ultimately comes down to mission as a Catholic university: to use our knowledge and discovery to help serve God and neighbor—and the term "neighbor," in this age, does not only mean someone who lives nearby. To reach the full expression of its mission, Notre Dame must do its utmost to touch as many lives in as many places as possible.

2.0 IMPACT FROM ANNUAL OPERATIONS

2.1 SECTION OVERVIEW

The University of Notre Dame's most direct and consistent economic contribution is through its large and growing annual operations. These daily operations support Catholic, values-centered education, scholarship, and service; thereby transforming students into exemplary scholars and civically engaged leaders. In carrying out these activities, the University is an economic driver for the city, county, region, and state. Notre Dame has an annual budget of nearly $1.2 billion and employs 7,500 people. In addition, it is a significant procurer of goods and services, particularly local goods thanks to its local purchasing sustainability commitment.

$1.6 Billion
in Statewide Economic Impact from Notre Dame Operations

This direct economic footprint has spillover impacts throughout the economy, supporting jobs and increasing various tax bases throughout the city and state. **In aggregate, the economic impact of Notre Dame's operations within the State of Indiana is over $1.6 billion in total output, supporting 10,100 jobs and generating over $26 million in state tax revenues each year.** This section steps through the economic and tax revenue impact of Notre Dame's operations at various geographic levels.

2.2 COMPONENTS OF OPERATIONS

As a prelude to the following sections of this report, which focus on the broader societal impact of the University, it is important to note that Notre Dame's operational budget is inclusive of its work in community engagement, education, research, and innovation. Those components of operations are explored in additional chapters because of the deeper impact they have on the South Bend-Elkhart region and because of their examples of the Catholic character, emphasis on scholarship, and regional impact that they impart on society.

Notre Dame's annual budget of $1.2 billion makes it an economic powerhouse for the City of South Bend, St. Joseph County, the three county region, and the State of Indiana. To determine the magnitude of the direct, indirect, and induced impact within these economies, it is first necessary to understand the level and composition of annual expenditures within each of these geographies, since economic impact depends largely on where expenditures occur (e.g. spending undertaken at an Indiana location will impact the Indiana economy, whereas spending and purchasing within Ohio or Illinois will not materially impact the Indiana economy).

To do so, deductions must be made for budgetary items that do not result in expenditures within a given geography. While nearly half of Notre Dame's budget is devoted to local compensation and

benefits for the employees of Notre Dame, the remaining budget is spent on other operating expenses such as goods and services. Some of these operating expenses, while important to Notre Dame's operations, were not included in the model for the reasons below:

- Operations Outside of Geography: The University of Notre Dame has one campus immediately adjacent to South Bend. However, there are smaller operational activities in other parts of the United States that should not be included in local spending. For this reason, expenditures for operations outside of St. Joseph County ($30.6 million) were excluded from the model.

- Notre Dame's annual operating budget includes $92.1 million in depreciation and financing costs. Depreciation does not represent an actual outlay of funds, while financing costs are likely not spent within the local and state economy. Therefore, these amounts are excluded from the analysis.

While it is important to exclude non-local operations and non-circulating costs from the analysis, certain expenditures, which are not included in the operating budget, should be added to the analysis. The following non-operating expenses were added to the model for the reasons below:

- Plant Fund Project Expenditures, which includes property maintenance that does not rise to the level of capital investment: $34.0 million

- Capitalized Equipment Expenditures, which includes cash expenditures in the local economy: $18.7 million

Accounting for these factors yields the remaining operating expenditures, which circulate through the local economy within each geography on an annual basis. These expenditures are included in our economic model to determine the total direct, indirect, and induced economic effects.

TABLE 2.1 – SUMMARY OF NOTRE DAME ANNUAL OPERATING EXPENDITURES[6]

Expense	Included in Model	Amount ($M)
Total Annual Operating Budget		**$1,169.3**
+ Plant Project Expenditures	YES	$34.0
+ Capitalized Equipment Expenditures	YES	$18.7
- Depreciation	NO	($92.1)
- Operations outside St. Joseph County	NO	($30.6)
Total Annual Operating Budget (Modeled)		**$1,099.3**

Source: Notre Dame (2017), Econsult Solutions (2018)

2.3 DIRECT ECONOMIC FOOTPRINT

The University's direct operating expenditures have ripple effects through the local economy for a broad array of suppliers (indirect effects), and through the significant compensation for its employees, which is in turn re-circulated through the local economy (induced effects). All of this activity stimulates and expands regional business activity and supports the employment base across a variety of sectors.

First, with nearly half of the University's operating budget devoted towards employee compensation, a large portion of the wages earned by Notre Dame employees are spent locally, generating induced economic impacts within South Bend, St. Joseph County, the three county region, and the state of Indiana.

Second, a large amount of Notre Dame's purchases of goods and services go to vendors based within South Bend, St. Joseph County, the three county region, and the state of Indiana. These vendors also spend within the local economy and employ nearby residents, which generate additional indirect economic impacts.

2.4 ECONOMIC IMPACT FROM OPERATIONS

The overall economic impact of Notre Dame's annual operations is the sum of its direct economic footprint plus the indirect and induced effects that that footprint creates. That means that the larger the geography, the larger the direct footprint and the larger the multiplier effect. The overall economic impact is estimated to generate on an annual basis (see Table 2.2):

[6] In the following table and throughout the report, column sums may not equal total amounts shown due to rounding.

- $1.36 billion in total output within the Notre Dame campus and the city of South Bend, supporting 8,500 direct, indirect, and induced jobs and $600 million in earnings;
- $1.58 billion in total output within St. Joseph County, supporting 10,000 direct, indirect, and induced jobs and $662 million in earnings;
- $1.59 billion in total output within the three county region, supporting 10,000 direct, indirect, and induced jobs and $664 million in earnings;
- $1.61 billion in total output within Indiana, supporting 10,100 direct, indirect, and induced jobs and $666 million in earnings.

TABLE 2.2 – ANNUAL ECONOMIC IMPACT OF NOTRE DAME OPERATIONS WITHIN NOTRE DAME AND SOUTH BEND, ST. JOSEPH COUNTY, THREE COUNTY REGION, AND INDIANA

Economic Impact	ND + SB	St. Joseph County	Three County Region	State of Indiana
Direct Output ($M)	$1,099	$1,099	$1,099	$1,099
Indirect and Induced Output ($M)	$261	$484	$495	$509
Total Output ($M)	**$1,360**	**$1,583**	**$1,594**	**$1,608**
Employment	**8,500**	**10,000**	**10,000**	**10,100**
Earnings ($M)	**$600**	**$662**	**$664**	**$666**

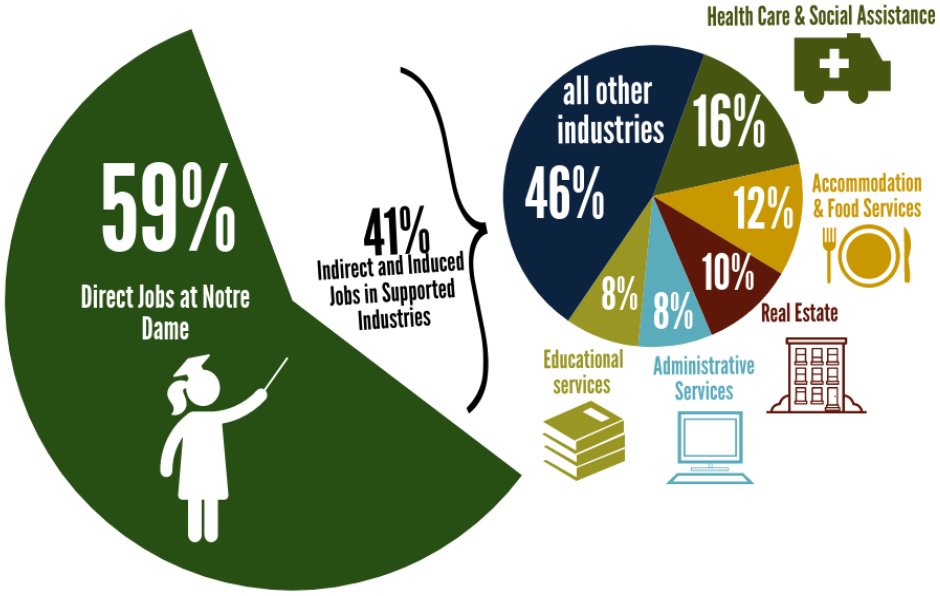
Source: Notre Dame (2017), Econsult Solutions (2018)

2.5 INDUSTRY DISTRIBUTION OF ECONOMIC IMPACT FROM OPERATIONS

Through Notre Dame's day-to-day operations, including the purchase of goods and services and the spending of labor income it generates, Notre Dame's activities have impacts on a variety of sectors. While the direct impacts fall within the educational services industry, the indirect and induced impacts benefit many other sectors, and most significantly affecting the health care & social services, accommodation & food services, real estate services, and administrative & support services. Overall, industries besides education receive about 40 percent of the total employment impact in Indiana (see Figure 2.1).

St. Clair Apparel is a local vendor for Notre Dame apparel and other branded goods.

FIGURE 2.1 – INDUSTRY DISTRIBUTION OF EMPLOYMENT GENERATED BY NOTRE DAME'S OPERATIONS WITHIN THE STATE OF INDIANA



Source: Notre Dame (2017), Econsult Solutions (2018), IMPLAN (2015), Piktochart (2018)

2.6 TAX REVENUE IMPACT FROM OPERATIONS

Although Notre Dame is a non-profit entity, the fiscal impacts generated by its operations are substantial. These operating activities increase local and state tax bases directly by employing faculty and staff members who pay taxes, and indirectly via spending by Notre Dame's vendors and employees.

Although Notre Dame is tax-exempt it is still tax-generating: its **annual operations** alone, and the spillover economic activity supported by them, produce **$26 million** in tax revenues for the State of Indiana government each year.

It is estimated that Notre Dame operations generate about **$26.3 million in personal income, sales, and business income tax revenues for the State of Indiana each year.** While the University does not directly generate sales and business taxes, its fiscal impact does include direct income taxes paid by Notre Dame employees. In addition, this $26.3 million in tax revenues includes sales, business, and income

taxes generated by the indirect and induced activities associated with Notre Dame's annual operations (see Table 2.3).[7]

TABLE 2.3 – ESTIMATED ANNUAL TAX REVENUE IMPACT FROM THE UNIVERSITY OF NOTRE DAME ANNUAL OPERATIONS TO THE CITY OF SOUTH BEND AND STATE OF INDIANA (IN $M)

Tax Type	City of South Bend	State of Indiana
Income Tax	$2.2	$19.1
Sales Tax	-	$6.4
Business Tax	-	$0.8
Total Tax Revenue	**$2.2**	**$26.3**

Source: Notre Dame (2018), Econsult Solutions (2018), IMPLAN (2015)

"Notre Dame is doubling-down on South Bend, Mishawaka, on Elkhart, on Indiana, and on the unsurpassed promise of higher education done well. With you as partners, we are doubling-down on the future."
— Father John I. Jenkins, C.S.C.



2.7 WHY IMPACT FROM ANNUAL OPERATIONS MATTERS

Notre Dame is a premier Catholic higher education and research institution. It is world-renowned for its educational mission, widespread service initiatives, and its top tier athletics programs. And while those functions play an important role in the regional and state economies, the function of Notre Dame as an economic engine in its own right should be emphasized.

The University's operations produce economic impact at a local, regional, statewide, and national level, including **$1.6 billion in annual economic activity within the state economy.** Hence, in the act of investing in faith-infused education, scholarship, and service, Notre Dame is a major economic engine for the State of Indiana and particularly for its immediate community. It directly employs nearly 7,500 people and its economic footprint directly and indirectly supports a total of

[7] Notre Dame's operations also generate income taxes (and, to a lesser degree, grow the base for other local tax categories) for the City of South Bend and other government jurisdictions besides the State of Indiana. Notre Dame's operations generated approximately $2.6 million dollars in income taxes.

3,400 jobs. In addition, the ripple effect of its operations, its employees' household spending, and the business opportunities represented by procuring various goods and services produces enough economic activity to generate $26.3 million in state tax revenues each year. And as Notre Dame continues to build on its strategic plan, its impact on the region's economic footprint will continue to grow.

Another particular example of this regionally-focused impact is through the lens of research and innovation. One example of this is Notre Dame's continued commitment to engagement in communities immediately surrounding its campus and throughout the region. This is the subject of Section 3, which explores Notre Dame's investment in and partnership with entities in South Bend and the South Bend-Elkhart region. These collaborative efforts enrich the region economically and socially, and are an important part of Notre Dame's annual operations and the achievement of its institutional mission.

Section 4 will further describe the 10-year trajectory of increasing volumes of research grants being awarded to Notre Dame. Not only do those research awards impact the University's overall spending; they also churn into future intellectual property outputs and entrepreneurial pursuits. That activity also attracts additional new business and talent to the region in the interest of benefitting from the Notre Dame research enterprise. As a result, operational levels and, therefore, economic impact will grow commensurately, meaning an even larger economic impact on the State of Indiana, supporting even more jobs and generating even more in local and state tax revenues.

3.0 COMMUNITY ENGAGEMENT AND LOCAL IMPACT

3.1 SECTION OVERVIEW

An important aspect of the University of Notre Dame's annual operations and an important facet of its institutional mission is **community engagement that produces local impact**. This has long been a priority of the institution with new emphasis under the leadership of President Jenkins.

Universities are realizing that they must pivot from being "ivory towers" to being engaged campuses. Notre Dame's investment in and engagement with its local community is borne of its faith-infused mission, which upholds the centrality of "loving your neighbor." It is also borne of its status as an anchor institution, rooted in a place and therefore interested in benefitting that place, and in turn, deriving benefit from that place. As a large-scale academic and research institution, this takes on many forms, including:

- Commitment to localized economic impact through employment and procurement opportunities;
- Provision of municipal services and public infrastructure;
- Investment in a campus grounds that serves as an amenity to the local community;
- Community-serving initiatives and resource centers;
- A dedication to activating students and staff through a wide range of volunteer community service and service learning efforts;
- Making a college degree accessible and affordable to local residents;
- Increasing access to athletic instruction, and athletic facilities for local residents.



"Recognition from the Carnegie Foundation is one of the best markers of progress in the field of higher education. Eminently consistent with the University's mission and Catholic character, classification as an institution of Community Engagement affirms Notre Dame's efforts to address challenges and improve the quality of life in communities near and far."

— Father John I. Jenkins, C.S.C.

The previous section focused on the economic and fiscal impact that Notre Dame's operations produce. While the community engagement and local impact that Notre Dame further generates is made possible by the operational budget quantified in that section, the day-to-day impact from the University affects more than can be quantified numerically through the budget. Beyond these impacts are the numerous ways Notre Dame chooses to invest in its surrounding community and invest in broader societal impact.

In 2010, Notre Dame received the classification for Community Engagement from the Carnegie Foundation for the Advancement of Teaching. Developed in 1970, the classification has been the leading framework for describing institutional diversity in US higher education. It recognizes "the collaboration between institutions of higher education and their larger communities (local, regional/state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity." This Carnegie Classification is an important imprimatur of Notre Dame's commitment to service and engagement with its local community. The next two sections discuss the ways that Notre Dame engages in activities that are impactful to society both locally and on a global scale. This section focuses on Notre Dame's commitment to community service and regional engagement in action; engagement-specific initiatives include volunteer service, public service provision, and on-campus amenities.

3.2 MISSION IN ACTION

At its core, Notre Dame is a Catholic institution. While many universities see service as a component of their mission, it is this **especially values-driven perspective that drives Notre Dame's community engagement and local impact initiatives**. By imparting these values on its students as well as its faculty and staff, Notre Dame creates exemplary scholars who work not only to transform themselves but also their communities. It is through this foundation that Notre Dame engages the community and world, putting their ideas into practice in the pursuit of a more just society.



Institutions of higher education are no longer just enclaves of intellectual pursuit. Today they play a much broader role in the economic, social, and physical development of cities and neighborhoods. Universities are rooted in and often have great interdependence with their host communities. The mutuality, cooperation, and reciprocity of universities and host communities' collaboration have the potential to make enormous transformations. For mutually beneficial interest, partnership between academic and non-academic expertise and perspectives in local communities is needed in many areas such as research, teaching, and learning that affect economic and community development.

Committed to deepening a culture of community engagement across the campus, Notre Dame created its first-ever community engagement strategic plan in 2012. The Community Engagement Coordinating Council (CECC) was established to guide the fulfillment of the plan. The CECC includes perspectives from across the University and the South Bend-Elkhart region to ensure that Notre Dame's engagement initiatives address the region's most pressing challenges. In 2017, the second strategic plan was developed to continue strengthening the engagement, with goals that include the following:

- **Community-University Collaborations**: Build and sustain active partnerships that are focused on effectively addressing areas of mutually beneficial interest.

- **Faculty, Staff, and Student Development**: Enhance and expand academic community engagement of faculty, staff, and students.

- **Communication**: Use creative strategies to more effectively communicate engagement opportunities and impacts with internal and external audiences. Use stories and collected data to enhance the coordination and impact of Notre Dame's activities.

- **Infrastructure**: Deepen and expand University infrastructure to support and coordinate academic community engagement.

Through this strategic approach, students, faculty, and staff can do good and build strong, inclusive community partnerships, thus demonstrating Notre Dame's goals of education, service, and partnership. The remainder of this section will describe the ways in which Notre Dame engages with the broader community, keeping in mind its commitment to infusing Catholic values and social justice into these actions.

3.3 LOCALIZED ECONOMIC IMPACT

$73 million
in spending with South Bend vendors in FY2017

An important contribution Notre Dame can and does make to its local community is ensuring that the economic opportunities represented by its annual operations is made available to local residents (in the form of employment opportunities) and local merchants (in the form of procurement opportunities). The University's presence in South Bend yields an economic impact that is also localized, thanks to the University's commitment to hiring locally, buying local, translating on-campus construction projects into local economic opportunities, and encouraging student and visitor spending among local establishments. This subsection of the report extracts data from other sections to elaborate on what this more **locally intensive economic impact** represents.

Cultivating a strong local business sector is important, as it has numerous benefits for local economies and citizens. Money spent at local businesses stays in the local economy much

longer, as local vendors are more likely to spend that money at other businesses in the community. Notre Dame is strongly committed to hiring local, buying local, translating on-campus construction projects into local economic opportunities, and encouraging student and visitor spending among local establishments.

> ***"I believe that a university needs a thriving city to reach its highest potential. Our students, faculty, and staff are a part of this city, a part of the community."***
>
> ***— Father John I. Jenkins, C.S.C.***

That commitment to local hiring and procurement reflects an understanding of the power of an institution's economic footprint as a mechanism for inclusive growth throughout the regional economy. Local hiring ensures that tax dollars are invested locally. Notre Dame's FY2017 employment data shows that more than 47 percent full-time and part-time employees reside in South Bend.[8] More than 76 percent of Notre Dame's employees reside in the broader three county region, inclusive of the City of South Bend.

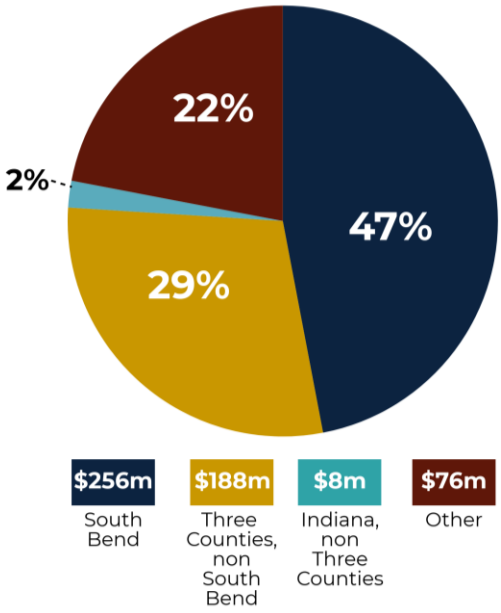
TABLE 3.1– FULL-TIME AND PART- TIME EMPLOYEES BY RESIDENTIAL LOCATION OF EMPLOYEE, FY2017

	Faculty		Staff		Post-Doc	Graduate	Total	Percent
	Full-Time	Part-Time	Full-Time	Part-Time	Full-Time	Part-Time		
South Bend	784	61	2,012	198	119	342	3,516	47%
Three County Region	476	31	1,370	104	68	136	2,185	29%
Other Indiana	6	8	63	3	3	36	119	2%
Outside of State	168	65	472	37	38	868	1,648	22%
Total	**1,434**	**165**	**3,917**	**342**	**228**	**1,382**	**7,468**	**100%**

Source: Notre Dame (2017)

[8] 7,468 total employees include 1,599 faculties, 4,259 staff, 228 post-docs and 1,382 graduates.

FIGURE 3.1 – EMPLOYMENT EARNINGS BY GEOGRAPHY, FY2017



Source: Notre Dame (2017)

In addition to being the largest employer in South Bend, Notre Dame contributes to the area through its partnerships with local businesses and non-profit organizations. For instance, Notre Dame recently contracted with Monterrey Security of Chicago to provide event management, security and guest services on football game days and for other events. While this is a Chicago-based firm, they hire locally for Notre Dame's security needs on game days and for other special events, creating additional employment opportunities to residents of the South Bend–Elkhart region.[9]

Vendor data for FY2017 identified about $781 million in total procurement.[10] About

Buying Local, Supporting the Region

The Navarre Hospitality Group is one example of how local businesses benefit from Notre Dame's local purchasing power. Navarre is a preferred vendor of the University; and Notre Dame is a major part of their businesses. In 2017, Navarre recorded approximately $1.4 million in catering sales specifically from the University. Navarre further benefits from University-adjacent catering as well as high volumes of restaurant sales from Notre Dame visitors.



[9] "Notre Dame releases new pricing structure for football tickets," *WNDU. 04Feb 2017,* Accessed 22 Mar 2018.
[10] The procurement data includes operations plus capital expenditures.

9 percent of that spending, or over $73 million, occurred within South Bend; 16 percent of spending occurs at the regional level. In total, 21.8 percent of Notre Dame's spending on goods and services stays within the State of Indiana. This commitment to local purchasing allows Notre Dame to support local economic goals, health and civic vitality.

TABLE 3.2– PROCUREMENT BY GEOGRAPHY, FY2017

Geography	Procurement Spending	Percentage
South Bend	$73,483,580	9.41%
Three County Region	$52,376,244	6.71%
Indiana	$44,567,810	5.71%
US, Non Indiana	$579,241,559	74.15%
Outside US	$31,480,788	4.03%
Total	**$781,149,980**	100.00%

Source: Notre Dame (2017)

$43 million
in spending with diversity and small business vendors in FY2017

Notre Dame is also committed to **developing business relationships with diversity suppliers**, and has been increasing inclusion efforts. Data provided by Notre Dame showed that in FY2017, more than 5 percent of total procurement spending is sourced from minority-, women-, veteran-owned, or small business certified, totaling around $43 million. This demonstrates Notre Dame's understanding that diverse suppliers are essential for fostering a healthy economy. Notre Dame's supplier diversity displays its interest in and commitment to the economic growth of all communities.



When making purchasing and sourcing decisions, Notre Dame has demonstrated a strong commitment to enhancing sustainability. By thoughtfully using its purchasing power, the University has the ability to influence not only the growth of sustainability on campus but also the greater growth of a sustainable local economy. The University's Comprehensive Sustainability Strategy and its 5-Year Action Plan aims to increase the percentage of sustainable products sourced by the University, and foster a community-wide purchasing culture where environmental considerations become an integral part of the evaluation process.

3.4 NOTRE DAME'S MUNICIPAL INFRASTRUCTURE

As tax-exempt entities, universities often face opposition from those who consider it wrong that large institutions are consuming public services without seeming to contribute their fair share of taxes to pay for them. As observed in the previous section, Notre Dame may be tax exempt but it is still tax generating, as its operations (and, as the remainder of the report will demonstrate, other facets of its existence) generate economic activity that yields significant tax revenues to local and state government. This sub-section explores the ways Notre Dame is its own provider of services normally borne by the public sector, minimizing the expenditure burden on local governments and in some cases serving as **a net provider of public services** to campus-adjacent areas.

Embracing the Catholic Climate Movement

The Hydro Station initiative will have an impact on reducing campus carbon emissions as part of a sustainability plan that aims to eliminate the use of coal for Notre Dame's power needs by 2020 and cut the overall carbon footprint by more than half by 2030. As a faith-based institution, Notre Dame has embraced the Global Catholic Climate Movement, recognizing the moral imperative to addressing this issue and embracing environmental responsibility through sustainable practices.

Large institutions like Notre Dame frequently possess within its operating capacity the ability to provide many public services that are usually rendered by a municipal government—a tradition that stretches back more than a century. In areas such as public safety, waste removal, energy generation, and emergency medical services, the University renders many of its own services within its campus, supplementing those provided by the City of South Bend or by St. Joseph County. Many public services are provided by Notre Dame's Office of Campus Safety, which provides administrative oversight to Notre Dame's police and fire department, as well as Risk Management & Safety Department and University's Emergency Preparedness and Business Continuity programs. Notre Dame also extends some of these services beyond its own campus, thereby benefitting the community.

Like many large institutions of higher education, Notre Dame maintains its own police department. The Notre Dame Security Police (NDSP) employs 110 sworn and non-sworn campus safety officers who patrol campus and respond to emergencies. NDSP offers campus patrol, investigations, event security, and crime reporting services to the campus community 24 hours a day, 365 days a year. On Game Day Weekends, the NDSP works closely with law enforcement authorities in the City of South Bend and in St. Joseph County to ensure that appropriate police coverage is offered throughout the community.



Also serving the Notre Dame campus' municipal needs is the Notre Dame Fire Department (NDFD), founded in 1879. The NDFD is the first university fire department in the United States, and is also the only career fire department at a private educational institution. NDFD provides 24-hour fire suppression, rescue and emergency medical services not only to Notre Dame but also provides these services free of charge to Saint Mary's College, Holy Cross College, and surrounding areas. In instances where additional fire or emergency-related assistance is needed by the South Bend community, the NDFD also supports neighboring fire departments. In total, the department serves around 15,000 citizens, and a population that swells to over 100,000 during a football game. The department has 20 full-time employees, and responds to approximately 1,500 calls annually, with an average response time of 2.5 minutes.

Notre Dame has strong commitment to sustainability. A key component of the University's Comprehensive Sustainability Strategy includes reducing its carbon dioxide emissions in part through increasing its use of renewable and recoverable energy sources. To address the sustainability commitment, Notre Dame and the City reached agreement on a 50-year lease to allow the University to construct and operate the Hydro Power Station. The new hydroelectric generation facility will provide between 7 and 10 percent of the University's electrical needs. After the construction of the Hydro Power Station, Notre Dame will also pay the City $1 million for restoration of Seitz Park, which is adjacent to the dam, as well as for ongoing maintenance of the dam through the duration of the lease.



"This is great example of what city-university partnerships can look like in the 21st century. The city is pleased to reach an agreement that invests in a sustainable future and makes downtown South Bend an even better place to live, work and play."

— Mayor Pete Buttigieg

3.5 THE CAMPUS AS A LOCAL AMENITY

An important manifestation of Notre Dame's service to and benefit for its immediate community is the campus it maintains. Notre Dame invests significant upfront and ongoing resources to maintain its campus for its students and employees, but that same space is also an amenity of great use for the local community, which benefits from **access to green space, recreational assets, and educational resources**. In recent years, Notre Dame has made a concerted effort to make its campus, facilities, and greenspaces an amenity to residents of the South Bend-Elkhart region.

FIGURE 3.2 – AMENITIES ACCESSIBLE TO LOCAL COMMUNITY



Source: Notre Dame (2017)

GREENSPACE AND RECREATIONAL AMENITIES

There are a number of on campus facilities that are publicly accessible; and these facilities are, in fact, among the region's greatest draws for both local and out-of-town visitors. These amenities are open and operating at Notre Dame's expense, and represent an important way the University serves and connects with the community around it.



One aspect of the University's campus that particularly stands out is **Notre Dame's extensive greenspace**. Sprawling across campus are more than 100,000 square feet of flower and shrub beds, parks like Irish Green where South Bend residents can enjoy the campus open space alongside students, as well as more than 8 million square feet of turf and more than 2.8 million square feet of athletic fields.

Notre Dame athletic amenities are frequently open to the public; for example, the Notre Dame Stadium serves as the finish line for the Sunburst annual race that winds through the city. The Compton Family Ice Arena is a 5,022-seat, two-rink ice facility located on the south edge of campus, which supports Notre Dame Hockey programs and hosts community games and free skate activities. The University also maintains two **golf courses** that are open to the public. Warren Golf Course is an 18-hole course constructed in a heavily wooded area on the northeast side of campus and is one of the best-rated courses in America by *Golf Digest*. The Notre Dame Golf Course sits on the southwest corner of the campus; it is a nine-hole course nestled on 250 wooded acres and hosts two traditional events: the National Catholic Championship and the Notre Dame Invitational. All of these amenities additionally support the region's tourism industry, as they make the campus a popular attraction for out-of-town visitors (a topic covered more broadly in Sections 6 and 7).

ON-CAMPUS AMENITIES OPEN TO THE COMMUNITY



The **Basilica of the Sacred Heart** is the central place of worship and prayer for the Notre Dame community, as well as countless members of the local community and out of town visitors who regularly worship there. In addition to students and community parishioners, approximately 250,000 visitors attend mass and nearly 14,000 people attend a wedding at the Cathedral on an average year.

The **Irish Green** is a 16-acre park on the southern end of the Notre Dame campus. The maple-, elm-, and oak-lined park is open to the public and serves as a gathering spot for both the University community and the wider community. The park often serves as a transitional area between the Notre Dame campus and the Eddy Street Commons, and frequently hosts events like picnics, film screenings, and other outdoor events.

The **Compton Family Ice Arena** is the site of two of Notre Dame's state of the art ice rinks, designed to host the Notre Dame hockey program as well as community hockey programs and skating events. The Charles W. "Lefty" Smith Rink, an NHL sized rink, serves as the main arena, while the Irish Youth Hockey League, figure skaters, public skaters and intramural broomball participants use the Olympic Rink. The arena also houses locker rooms, training facilities, and offices.



The **DeBartolo Performing Arts Center** hosts the region's premier cinematic and performing arts programs. The Center consists of five different venues and has 24 staff members, 45 student crewmembers, and over 80 volunteers. Every year, more than 100,000 people visit the Center to participate in and enjoy the various shows and programs the Center offers.

The **Charles B. Hayes Family Sculpture Park** is part of the larger southern entrance into Notre Dame that connects the Irish Green, the Compton Family Ice Arena, and the DeBartolo Performing Arts Center. The park's theme is *Reclaiming our Nature*, which expresses humanity's desire for spiritual transcendence and represents the areas transformation from an old landfill to a wetland and prairie. The park is open every day of the year and hosts several famous sculptures including *Fern Temple IV* by Fr. Austin Collins and *Life of Christ/Cycle of Life* by Philip Rickey. The park also includes a stone amphitheater, more than 275 trees, and paved pathways.

The **Eck Visitors' Center** stands close to the Notre Dame Avenue entrance to campus and welcomes new and returning visitors to campus. The Eck Center serves as the launching point for regularly scheduled campus tours, and houses a 150-seat auditorium, which presents an introductory video about Notre Dame. The Eck Center is another venue for receptions, meetings, and other special events available for potential visitors and the local community to rent.

The **Hammes Notre Dame Bookstore**, built in 1998 and adjacent to the Eck Visitors' Center, is a major campus destination for fans on football game-day weekends and a hub of good literature and camaraderie throughout the year. This is an ideal meeting place, with a café and comfortable seating.



Hesburgh Library is open to students, faculty, and staff as well as community members. As a Federal Depository Library, the Hesburgh Library provides members of the community with access to federal government documents in print and on-line. It also partners annually with the St. Joseph County Public Library on programming related to the *One Book, One Michiana* reading campaign.

Morris Inn is a hotel that sits at the heart of Notre Dame's campus and is described as "the living room of the University." The hotel experienced a $30 million renovation and reopened in late August 2013, and now offers 150 guest rooms. There are three on-site restaurants as well as a conference center and spaces for special events such as weddings.

The **Snite Museum of Art** is founded on the principle that art is essential to understanding individual, shared, and diverse human experiences and beliefs. The Museum encourages close looking and critical thinking to stimulate inquiry, dialogue, and wonder for audiences on campus and beyond. The permanent collection of the Museum features over 29,000 artworks and continues to grow through endowment income, gifts of art, and gifts of funds to purchase artworks. Major collection strengths include Mesoamerican art, old master paintings and drawings, nineteenth-century French art, nineteenth-century photography, and the art of Ivan Mestrovic. Holdings also include Native American, Latino, African, African-American, and contemporary art. The Museum has free admission and is open to visitors both on- and off-campus.

3.6 COMMUNITY ENGAGEMENT AND INVESTMENT

As an anchor institution, Notre Dame is committed to mutually beneficial engagement with local community partners to enhance the region's quality of life. The University invests heavily within the South Bend-Elkhart region through volunteer activities, service learning, and a wide range of educational and financial contributions that reflect its institutional values and a stated commitment to measurable impact. Reciprocity in partnerships and redoubled efforts to improve communication and understanding around common interests have improved the University's ability to strategically engage diverse stakeholders that call the region their home.

ROBINSON COMMUNITY LEARNING CENTER

The Robinson Community Learning Center (RCLC) is an off-campus education initiative of the Notre Dame Office of Public Affairs, in partnership with Northeast Neighborhood residents of South Bend. The mission of RCLC is to welcome community and Notre Dame partners that strengthen the Northeast Neighborhood of South Bend through relationship building and educational opportunities. By promoting innovation and excellence, the Center builds individual capacity and enhances existing systems throughout South Bend. Programs are overseen by a program advisory board comprised of residents and community partners as well as Notre Dame faculty, staff and students. An estimated 500 participants come through the doors of the Center each week for regular programming. The Center also collaborates with community schools and agencies in the broader South Bend area, with program outreach that directly affects nearly 3,000 additional youths per year. Approximately 500 college student volunteers help to implement RCLC programs on-site and throughout the community. This level of outreach is possible due to strong and intentional relationships with community partners and the shared resources of the University and community.

RCLC Youth Programs

The RCLC provides a range of youth programs on-site during the afternoon and early evening hours, reaching more than 280 children in FY2017.



The RCLC Youth Development Afterschool Tutoring and Enrichment Program provides one-on-one tutoring from college student volunteers to local youth, grades 1-12. Tutoring sessions for youth grades K-5 include structured reading and writing, sight words, vocabulary, homework help, and book clubs. Tutoring for grades 6-12 focuses on homework, current events, and SAT/ACT Prep. When not in tutoring, all afterschool participants take part in enrichment activities, including Brain Health classes, Take Ten, arts and crafts, career exploration, and leadership training. Students also take field trips to campus, and enjoy “Fun Fridays” activities offered by ND student clubs and dorms.

Each weekday, 12-25 youths, grades 3-12, stay at the RCLC into the evening to participate in RCLC evening clubs, first receiving a healthy dinner, shared “family style” among students and staff. Ongoing evening activities and clubs include the Robinson Shakespeare Company, the Youth Entrepreneurship program, the Biology Club, the Lego Club, the iRobotics Team, and tutoring for older students.

TABLE 3.3 – NUMBER OF PARTICIPANTS IN RCLC YOUTH PROGRAMS

Program	Number of Participants	Participant Grade
Summer Program	60	5-8
Youth Development--After School Tutoring/Enrichment	58	K-12
Robinson Shakespeare Company	56	3-12
LitCorps Tutoring at the RCLC	39	1-6
Lego Robotics	20	5-8
Youth Development--Evening Tutoring	15	6-12
English as a New Language (ENL) Preschool	15	Pre-K
Robinson Enterprises	12	7-12
Advanced Skills/Entrepreneurship	10	7-12
Total	**285**	

Source: Robinson Community Learning Center (2017)

RCLC Adult Programs

RCLC's educational programs are not limited to youth participants, but serve all ages. The youngest participant is the six-week old in the Talk With Your Baby classes, and the oldest participant is the 96-year-old in the senior computer club. Last year, more than 220 adults benefited from RCLC's commitment to promote lifelong learning for adults. The RCLC offers many opportunities for senior adults to engage in ongoing learning and connect with their community. More than 50 seniors participate in activities such as book clubs, computer classes, and senior exercise. Last year the monthly Lunch and Learn lecture series had an average attendance of 55 seniors.

Each Monday through Thursday, RCLC classrooms are filled with 85 adults from 24 different countries learning English as a New Language (ENL). This culturally diverse learning community is made possible by the RCLC's 17-year partnership with the South Bend Community School Corporation. Down the hall from the adults, their children are learning English in the RCLC's ENL Preschool classroom. Last year 15 children were enrolled in the ENL preschool, which provides a literacy-rich program based on the High Scope curriculum.

RCLC is also the home of Talk With Your Baby (TWYB), a free, eight-session program that educates parents and other caregivers about the importance of talking often with babies and young children from birth to age three. TWYB offers neighborhood classes and also trains facilitators for local agencies so they can offer classes to their clients, thereby broadening outreach through partnerships.

TABLE 3.4 – NUMBER OF PARTICIPANTS IN RCLC ADULT PROGRAMS

Program	Participants
ENL	85
Lunch and Learn	55
Talk With Your Baby	34
Senior Computer Clubs	30
Book Clubs	10
Senior Exercise/Yoga	10
Total	**224**

Source: Robinson Community Learning Center (2017)

Community Partnerships

The RCLC has forged strong partnerships with the region's community-serving organizations in order to better leverage all of their resources for broader impact. These collaborative initiatives include the Youth Entrepreneurship Program, the Robinson Shakespeare Company, and Take Ten.

Middle and high school youth receive instruction in entrepreneurial concepts, ideation, critical thinking, problem solving, and public speaking as part of the RCLC's Youth Entrepreneurship Program, which is implemented at six local schools and the RCLC. ND student mentors provide individual coaching to youth on how to pitch an idea and develop a business plan.

The Robinson Shakespeare Company (RSC) was founded in 2008 with the objective of bringing high quality theatre instruction to children from diverse backgrounds. Over the past decade, the program has grown a company of 13 participants to an outreach program that reaches over 400 youth each week. Today RSC staff work directly with teachers and children in partner schools, including Dickinson Fine Arts Academy, Muessel Primary Center, Jefferson Intermediate Center, Perley Fine Arts Academy and McKinley Primary Center, integrating drama into the daily academic curriculum, as well as leading afterschool drama clubs.

Take Ten is a violence prevention/conflict resolution curriculum that focuses on teaching skills to handle conflict in a peaceful way. Take Ten provides participants with the tools to "Talk it Out, Walk it Out, or Wait it Out" as alternatives to violence, and builds their capacity to make better, more positive choices. In 2017, more than 100 college student volunteers taught the Take Ten curriculum to 1,895 youth, grades K-12, and 210 adults, at 17 local schools and seven local agencies.

TABLE 3.5 – NUMBER OF PARTICIPANTS IN ADDITIONAL RCLC PROGRAMS

Program	Number of Participants	Participant Age/Grade
Take Ten (at local schools and agencies)	1,895	K-12
Shakespeare Outreach	633	K-12
Advanced Skills/Entrepreneurship (in local high schools)	70	9-12
NDCAC Afterschool Tutoring and Arts Enrichment Program	51	1-4
NDCAC Summer Camps	50	5-8
LitCorps Tutoring (at Boys & Girls Clubs)	45	1-5
Take Ten for Adults	210	Adult
Talk with Your Baby (classes offered through local agencies)	278	Adult
Total	**3,232**	

Source: Robinson Community Learning Center (2017)

NOTRE DAME CENTER FOR ARTS & CULTURE

The Notre Dame Center for Arts & Culture (NDCAC) was established in March of 2013. The Center is located in the historic West Washington neighborhood and provides opportunities for students, faculty, and community to learn about and celebrate the art and culture of diverse people around the world. The Center's signature program, *The Global Experience*, is a vehicle for the collaboration with higher education institutions and cultural organizations throughout the region based on annual themes. NDCAC serves over 10,000 guests per year and partners with over 50 Notre Dame faculty and staff to provide culturally specific academic programming open to both campus and community.

NDCAC has numerous internal university collaborations including but not limited to the Departments of Africana Studies, American Studies, Anthropology, Art, Art History, Architecture & Design, Creative Writing, Engineering, Psychology, English, Film, Television, and Theatre; and Romance Languages; the DeBartolo Performing Arts Center, the Institute for Latino Studies, the Law School; the Snite Museum of Art; and Fischoff National Music Chamber Organization.

NDCAC Education Programming

Over 150 children are served each year through the Center's educational programs. NDCAC's after school programs provide unique individual and small group literacy tutoring to 25 area elementary school children each semester. More than 40 Notre Dame and other local college student volunteers offer tutoring in reading, writing, comprehension and vocabulary. The children also participate in art enrichment, drama and conflict resolution activities. NDCAC also offers summer art camps, reaching over 50 middle school youth each year.

NDCAC Galleries



The Crossroads Gallery and auxiliary exhibition spaces provide opportunities for viewers to reflect, enjoy, and to learn through the visual arts. The Gallery's goal is that visitors gain new experiences from the presentations, creativity and the aesthetics of new visual expression accompanied by related, community educational programming.

The Office of Community Relations

Housed in NDCAC, the Office of Community Relations uses art and culture to build relationships. The members of the Office embody Notre Dame's goal to be responsive to her neighbors and to support the local community's efforts to create a prosperous, healthy environment in which to live.

Segura Arts Studio (SAS)

In addition to having an international reputation for publishing museum-quality fine art prints, Segura Arts Studio demonstrates the University's commitment to diversity and inclusiveness through its mission of working primarily with underrepresented artists whose work tends to address issues of social justice. In addition to producing new work, visiting artists conduct workshops for children via the center's educational programs, classroom lectures, artist talks for campus and local community members, and special projects with disenfranchised groups at various non-profit organizations in the local community.

THE SNITE MUSEUM



The Snite Museum hosts interactive tours and hands-on activities available with free admission for K-12 students. The Museum also offers summer apprentice opportunities and an annual arts career day for local high school students who are interested in exploring career pathways in the arts. The Museum has long-standing partnerships with the three local public school districts and also regularly works with regional parochial schools and other schools in the region. These relationships bring over 8,000 students to the Museum each year. The Museum also hosts regular programs for families and the public throughout the year.

DEBARTOLO PERFORMING ARTS CENTER

The DeBartolo Performing Arts Center (DPAC) provides community programs and training through its Visiting Artist Series: artists engage after each performance with children from three schools, two community centers, and the Boys and Girls Club. The Center also frequently offers shows and events that are free of charge to the public, providing a valuable and accessible cultural amenity to the community. Finally, DPAC and South Bend Schools were designated as "Partners in Education" with the Kennedy Center for the Arts in Washington, DC. Through this affiliation, DPAC hosts three Kennedy Center artists annually to provide professional development to approximately 50 K-12 educators on either teaching about the arts or teaching other subject areas through the arts.

HESBURGH LIBRARY

In addition to serving as a resource for Notre Dame students, faculty and staff as well as offering local clergy and nonprofit professional the opportunity to lend from its reserves, the Library makes its volumes available to the community in a number of ways. One of those initiatives is CurateND, which has established an open access digital repository of Notre Dame's body of knowledge and data created by its community of scholars. Further community programming includes participation in *One Book, One Michiana* as well as public access to special exhibitions and tours.

ALLIANCE FOR CATHOLIC EDUCATION

Established in 1993, Notre Dame's Alliance for Catholic Education (ACE) is committed to sustaining, strengthening and transforming Catholic K-12 schools through innovative practices including forming and training new generation of teachers and school leaders, increasing access of high-performing Catholic schools to more children, enhancing school vitality, and conducting research on Catholic education. By 2017, the program has served one out of every four Catholic schools in the US, reached 70 percent of all US dioceses, and impacted around 180,000 students. ACE strives to ensure that all children, regardless of background have the opportunity to benefit from a Catholic education. Within the State of Indiana, there are five schools engaged with the Notre Dame ACE program, all in Indianapolis.

THE MOREAU COLLEGE INITIATIVE

Faculty and staff from Notre Dame and Holy Cross College were early collaborators in a prison education model disseminated through the Bard Prison Consortium. Through this affiliation, Notre Dame and Holy Cross representatives launched a liberal arts prison program in 2013. The Moreau College Initiative (MCI) offers credit-bearing college courses leading to Associates of Arts and Bachelors of Arts degrees for incarcerated men at Indiana's Westville Correctional Facility. Since inception, 117 men have been admitted and enrolled in college courses; 50 students are currently enrolled in MCI classes full-time. The program has an 83 percent retention rate; 24 men

have graduated with their AA degrees in Liberal Studies from Holy Cross College since 2013; six others earned B.A. diplomas in Spring 2018.

THE CENTER FOR THE HOMELESS

The Center for the Homeless is a non-profit organization in South Bend that provides transitional housing for an average of 175 guests each night. The organization partners with the Center for Social Concerns (CSC) to provide a wide array of community-based courses and volunteer opportunities for Notre Dame students who accompany adults and children as they prepare for their life after the Center.

TRIO PROGRAMS

Notre Dame hosts two TRiO programs in partnership with the US Department of Education, the Educational Talent Search and Upward Bound. TRiO programs are a set of federally funded interventions designed to support first-generation and low-income students in pursuit of higher education. Both programs offered at Notre Dame focus on college access, providing academic, career, and financial counseling to approximately 1,000 area students (11 middle schools and 4 high schools) as they prepare to graduate from high school and continue on to succeed in college. In the 2016-17 school year, 96 percent of Upward Bound participants and 84 percent of Talent Search students pursued post-secondary education after high school. Approximately 30 Notre Dame students tutor or mentor TRiO participants each year.

VOLUNTARY CONTRIBUTIONS

Notre Dame is committed to contributing to improving the quality of life of not only the students and faculty, but also the surrounding community and the broader region. Notre Dame provides financial support through charitable contributions to the communities and organizations. In FY2017, Notre Dame contributed a total of around $700,000 charitable donations to organizations and government agencies in South Bend and the surrounding communities.

3.7 SPORTS PROGRAMMING IN THE COMMUNITY

Athletics are an important part of campus life and the identity of the University. Due to the University's ethos of service and engagement, the Athletic Department provides resources for the immediate neighborhood and for children from around the country in the form of a wide range of on-campus sports camps and other sports programming.

SPORTS CAMPS

Notre Dame Athletics Department attracts a diverse array of young student-athletes from across the country to experience Notre Dame sports facilities, campus amenities, and national

championship caliber coaches. In 2017, more than 8,000 children participated in the summer camp program in 50 individual sessions of 18 sports including football, basketball, golf, fencing, soccer, hockey, and other sports. Around 620 camp counselors are involved in the program each year. Under the expert care of Notre Dame's camp coaches, athletes learn lifelong skills such as teamwork and have the opportunity to experience a collegiate atmosphere.

SPORTS CAMP SCHOLARSHIP FOR LOCAL ELEMENTARY STUDENTS



Maintaining the Notre Dame Athletic Department's excellence pillar and providing more opportunities for K-12 students from local underserved schools to get access to sports education resources, the Camp Scholarship Initiative was established in 2015. These scholarships are awarded annually to local elementary school students who demonstrate a positive attitude, success in the classroom and outstanding character. Four local elementary schools participated in the camp scholarship program, which are Perley Fine Arts Academy, Lincoln Primary Center, Harrison Primary Center, and St. Adalbert Catholic School. By 2017, around 450 students competed for the scholarships and seven students were awarded the opportunity to attend a Notre Dame Sports Camp of their choice, free of charge.

3.8 CATHOLIC VALUES IN ACTION: VOLUNTEERISM AND SERVICE LEARNING

Notre Dame students and staff provided **93,000 hours** of service in 2017

As a reflection of its Catholic character and institutional mission, Notre Dame has created many venues for students and employees to contribute to and connect with the local community, including a number of volunteer service and service learning initiatives. In 2010, Notre Dame was recognized as an "Engaged Institution" by the Carnegie Foundation for the Advancement of Teaching. Such engagement emanates directly from the University's Catholic ethos and character and builds on the rich assets of its students, faculty, staff, and community partners. Over 80 percent of Notre Dame students participate in some form of service learning or service during their undergraduate career. Commitment to service continues after graduation: approximately 10 percent of each year's class spends a year or more in full-time volunteer service after graduation.

According to EngageND, a database developed to document coordinate and collect data on community engagement activity, Notre Dame engaged in approximately 700 projects, serving around 150,000 people in 2017. In addition, the Center for Social Concerns reports that more than 2,000 students contributed over 93,000 hours to serve the local community in multiple aspects including education, community service, sports, and fine arts.

TABLE 3.7– COMMUNITY ENGAGEMENT ACTIVITY SUMMARY FY2017

Purpose	Projects	People Served	Student Volunteers	Total Volunteers	Student Hours	Total Hours
Education Programs & Services	249	14,665	424	695	3,578	7,748
STEM Education Outreach	167	9,108	220	398	1,568	5,097
Community Service	68	7,262	555	874	24,291	28,346
ND Student Learning Activity	60	2,926	340	395	5,009	6,780
Professional Development	52	1,987	127	186	19,035	23,225
Research	33	2,590	79	113	6,769	14,540
Community Development	25	4,612	48	84	2,525	3,590
Physical fitness / Sportsmanship	17	2,382	76	93	740	1,510
Humanities / Fine Arts Outreach	14	250	6	20	240	340
Board Membership	6	2,800	0	5	0	144
Other	6	100,500	110	115	1,300	1,720
Total	**697**	**149,082**	**1,985**	**2,978**	**65,055**	**93,040**

Source: EngageND (2017)

NOTRE DAME'S CENTER FOR SOCIAL CONCERNS



Notre Dame's Center for Social Concerns (CSC) has been the focus of community-based learning at the University since 1983. As a University institute with a full-time staff of 35 reporting directly to the Office of the Provost, its mission is to facilitate community-based learning, research, and service informed by Catholic social tradition. Three interdependent ideals encapsulate the Center's work. First, education for justice is both a commitment and theme embedded in courses, programming, and work with faculty of the Center. Second, the research mission of the Center is to identify, analyze, and share the evolving ways that service learning and related educational experiences contribute to college student development and to the efforts of students, faculty, and community constituents toward the creation of a more just and humane world. Third, the Center assists students and faculty in examining service learning experiences and actions for justice in light of Catholic social thought.

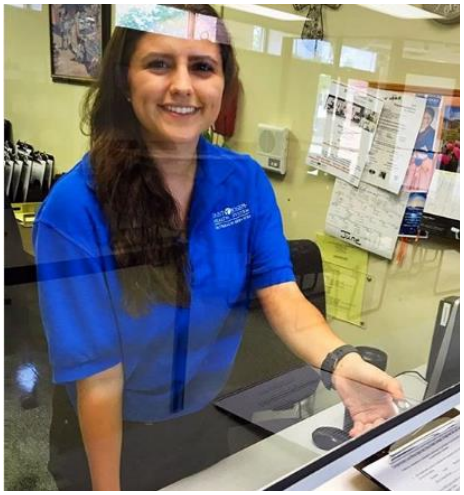
Community-Based Learning

The Center for Social Concerns partners with more than 90 organizations throughout the local community and has formalized, financial partnerships with seven of them: Boys and Girls Club of St. Joseph County, Center for the Homeless, Imani Unidad, La Casa de Amistad, LOGAN Center, Robinson Community Learning Center, and Saint Joseph Health System-Community Outreach. Through these Community-Based Learning Coordinator (CBLC) partnerships, the Center for Social Concerns ensures quality learning experiences and organizational impact.

The Summer Service Learning Program

The Summer Service Learning Program (SSLP) offers students an eight-week immersive service experience to address questions of social justice in light of the Catholic social tradition. Each summer, approximately 250 SSLP students serve at 180 non-profits, hospitals, parishes, schools, summer camps, and other community-based organizations that work with a wide variety of populations. Most SSLP placements prioritize opportunities for students to build meaningful relationships with the people served by their organizations. The SSLP enables Notre Dame students to engage in service initiatives across the country and then bring their experience back to campus, where they frequently continue to engage in CSC's work in the South Bend-Elkhart region.

Academic Community Engagement and Impact



An example of the impact the Center for Social Concerns has through its programming for individual student efforts is the work of ND senior and rising medical student Erin McCune. Working at a site that provides basic health care to low-income individuals, Sr. Maura Brannick Clinic, McCune identified a research need regarding understanding why patients miss appointments. McCune made this research question her Poverty Studies minor capstone, advised by community-based research faculty at the CSC. With funding through the SSLP, McCune provided the survey to all 423 active patients during her summer service. According to her research, local low-income patients face a range of challenges to making appointments from bus routes and fares to restrictive work hours; and no-show appointments can have serious costs for clinics. She completed the analysis of the data during the following semester for her capstone, and provided evidence-based recommendations to the Clinic for reducing missed appointments.

BOWMAN CREEK EDUCATIONAL ECOSYSTEM

Bowman Creek Educational Ecosystem (BCe2) is an initiative of the College of Engineering in partnership with the Center for Social Concerns at Notre Dame, with collaboration from Indiana University South Bend, Ivy Tech Community College, and several local high schools. The goal of BCe2 is to engage students in paid internships while building community vitality and environmental quality in South Bend's Southeast neighborhood. BCe2 initially began as a cleanup program, but has since expanded to improving the general welfare for residents in the surrounding communities. Students are active in engaging with community members of the Southeast neighborhood by conducting door-to-door surveying and hosting community picnics to understand the needs of local residents and to ensure that residents have input on how to improve their community.

Since starting in 2015, BCe2 has launched several pilot programs to help the area improve. For example, the outdoor lighting program has given homeowners the necessary funding to improve lighting in front of their homes to help discourage delinquent behavior at night. In addition, the Vacant Lot Optimization Team focuses on creating new affordable housing and installing rain gardens to soak up excess rainwater that would previously flood into residents' basements.

"As a community committed to service, we challenge students to grow in their understanding of complex human realities, and we call them to respond to the needs of the world with compassion and committed action."
— Dr. Thomas Burish, University Provost



STEM ENGAGEMENT IN LOCAL SCHOOLS

Notre Dame's College of Science has a large number of programs that introduce new opportunities for K-12 students from local schools to learn about science, technology, engineering, and mathematics (STEM). Among those programs is the Notre Dame DNA Learning Center, a hands-on science center dedicated to preparing young students with biology education especially in molecular biology. The Center offers 33 workshops per year, resources for elementary through high school educators, one-week summer camps for high school students, classroom visits, and laboratory field trips for 5,387 students in grades 5-12. The Interdisciplinary Center for the Study of Biocomplexity is another biology research center, which incorporates mathematical and computational modeling for new biological experiments. The program collaborates with science and math teachers from local high schools in Indiana and Michigan, and introduces the new biological experiments and models to the classrooms.

3.9 SCHOLARSHIP AND FINANCIAL AID TO LOCAL RESIDENTS

Because of our knowledge-based economy, it is important that college remains affordable for all students. A frequent topic of public discourse is the overall sticker price of a college education, with students, their parents, and government officials wondering if college is relevant, accessible and affordable for the average student.

Notre Dame has recognized the affordability question that prospective and current students face and has taken strides to make higher education accessible for all. In fact, the University is one of only 66 colleges nationally that is committed to meeting the full demonstrated financial need of its undergraduate students for all four years. Over half of last year's freshmen who applied for aid received an average need-based scholarship of $39,100 from Notre Dame, and nearly 75 percent of undergraduates receive financial aid.

More importantly, Notre Dame is also strongly committed to ensuring greater access to educational and credentialing opportunities through a number of scholarship and financial aid programs available to local residents. Based on financial aid data provided by Notre Dame, in 2017, around 360 students from the three county region received financial aid for their studies at the University. For the 2016-2017 academic year, those students received more than $15 million in total aid, almost a third of which went to South Bend residents.

TABLE 3.8 –REGIONAL STUDENT FINANCIAL AID YEAR: AY16-17 TYPE

	Institutional Grant Aid		Institutional Work Study		Total Institutional Financial Aid[11]	
Student's Home	**Head Count**	**Amount**	**Head Count**	**Amount**	**Head Count**	**Amount**
South Bend	110	$4,450,406	44	$148,275	112	$4,598,681
Other Three County Region	251	$10,235,533	91	$308,764	256	$10,544,297
Total Three County Region	**361**	**$14,685,939**	**135**	**$457,040**	**368**	**$15,142,978**

Source: Notre Dame (2018)

The University's financial aid and scholarship programs help keep world-class education on campus accessible to all students. Notre Dame's dedication to financial accessibility for current and prospective students comes from its Catholic commitment to serving those in need. The University invests significant resources—more than $300 million annually—on affordability initiatives. Notre Dame does this because of its values-driven mission and also because it

[11] The head counts can be overlapping because one person can receive both types of financial aid. The dollar amount is not overlapping.

recognizes the long-term return on their investment—an alumni network committed to doing good both in South Bend and across the world.

3.10 WHY COMMUNITY ENGAGEMENT AND LOCAL IMPACT MATTER

Emanating from the University's Catholic ethos and its desire to promote social good, **Notre Dame devotes a large number of meaningful resources to serve, invest in, and engage with the surrounding neighborhoods**. Notre Dame's community engagement takes a myriad of forms across the domains of teaching, service and research. In the realm of teaching, both K-12 and adult education is addressed in the form of community-based learning, providing the students with opportunities to get involved in the community, to learn, teach, and serve. In the realm of services, Notre Dame not only provides public services such as police and fire to the surrounding communities, but also offers access to recreational space, facilities, and programs. Charitable contributions and scholarships are granted to the local community to address Notre Dame's support in the form of financial aid. All these efforts have the effect of strengthening the community that hosts the University, as well as the relationship the University has with the community.



"The relationship between South Bend and Notre Dame is the envy of a lot of college towns. I was just at the US Conference of Mayors last week, and talking with other mayors of cities with universities, you can definitely feel the difference."
— Mayor Pete Buttigieg

4.0 SCHOLARSHIP, RESEARCH, AND INNOVATION

4.1 SECTION OVERVIEW

Values-led scholarship, research, and innovation are increasingly important for the competitiveness of our regions and the soul of our generation. The University of Notre Dame leads in this space, marshaling its considerable academic and research work as well as the creative pursuits of its faculty and students for the advancement of human knowledge and the betterment of society.

Knowing that an intellectual community must be inclusive in order for it to be impactful and innovative, Notre Dame has invested significantly in ensuring diversity and affordability for its student body. Under the leadership of President Jenkins, Notre Dame has also grown its research efforts in scale and in reach through the development of innovation ecosystems in partnership with other public and private sector entities. These efforts have yielded more breakthroughs in research, a stronger creative community, and a deeper understanding of the interplay between faith and knowledge. All of this creates a powerful magnet for additional human and financial capital, further strengthening the Notre Dame community and improving the competitiveness of the region and state in which it is located.

Research, scholarship, and innovation are all aspects of Notre Dame's annual operations, and their economic impacts are included in the overall impact of the University's operational budget as articulated in Section 2. This section explores the qualitative, societal impacts that these aspects of the University produce. Importantly, the interplay of research, scholarship, and innovation within a university setting initiates a virtuous cycle both within the University and throughout the region that spurs future innovation and economic benefits.



"Our research must not be separate from our Catholic mission, but must draw strength from it and contribute to it. Every department, college, and institute must, wherever possible, find dimensions of their research agenda that reflect our Catholic character and values."
— Father John I. Jenkins, C.S.C.

4.2 THE ROLE OF RESEARCH UNIVERSITIES TO REGIONAL COMPETITIVENESS

In the modern knowledge economy, research universities have become important anchors in the innovation ecosystems that regions are using to attract human and financial capital. Thus, the productivity of research universities is inextricably connected to the utility of their regions, and hence the regions' success hinges on the strength of its research universities' linkages to other participants such as large corporations, the start-up community, and public sector entities.

Notre Dame's strategic alliance with the industry partners and public sector goes beyond the traditional funding of research projects. Strategic partnerships are designed to merge the discovery-led culture of the University with the innovation-driven environment of companies. More broadly speaking, the University acts as an anchor institution, providing a long-term presence that drives economic growth as many of the innovations have long given the region a competitive advantage.

Notre Dame acts as a powerful magnet for attracting and retaining skilled students and staff into the region. Through its growing network of private firms and industry experts, it also fosters an entrepreneurial climate that leads to start-ups, thus adding to the entrepreneurial body of the growing tech region.

4.3 THE IMPORTANCE OF ACCESS AND DIVERSITY TO CREATING AN INCLUSIVE AND INNOVATIVE INTELLECTUAL COMMUNITY

Notre Dame strives for **a spirit of inclusion** among the members of this community, which proceeds from the University's Catholic character. Catholic social teaching affirms the transcendent dignity and worth of every human person. It holds that human beings are inescapably social and, as such, must work together to realize the common good. Notre Dame is committed to ensuring that each individual is embraced by the community, regardless of race, nationality or ethnic group, religious tradition, gender, or socioeconomic class. Diversity matters for scholarship, research, and innovation because an institution cannot pursue excellent academics and advance human knowledge if it systematically excludes entire groups of people based on skin color, country of origin, gender, or ability to pay. Notre Dame's diversity and inclusion efforts are therefore an important part of its ability to impact the community and society through scholarship, research, and innovation. The University's concerted attention to ensure a diverse and inclusive campus is supported by a number of initiatives and is further championed through the Office of the Provost's Director for Academic Diversity and Inclusion and the Office of Human Resources' Director of Staff Diversity and Inclusion.

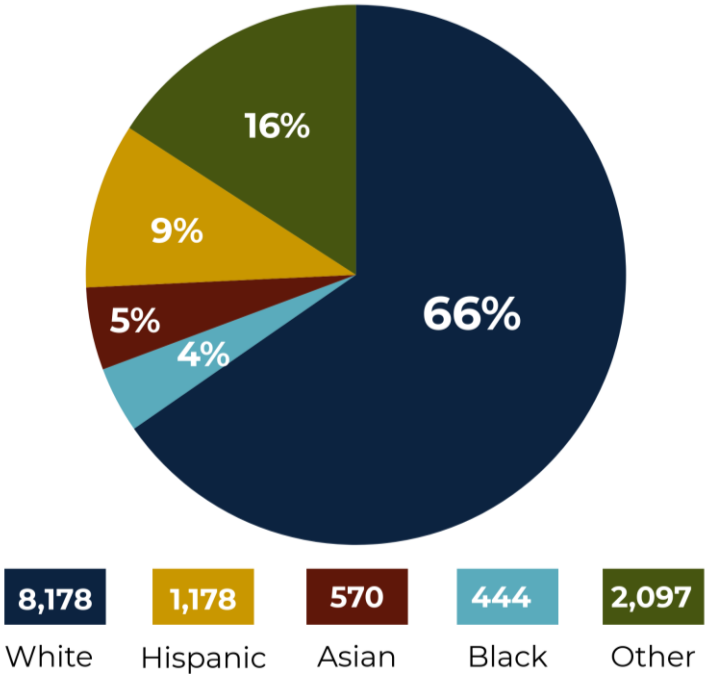
DIVERSE STUDENT BODY

A great university must encompass a universe of backgrounds and experiences, ideas and ideologies, theories and perspectives. Notre Dame embodies this diversity by increasing access

for talented and hardworking students of all backgrounds. Ethnic and socioeconomic diversity on college campuses confers a variety of benefits to universities and their surrounding communities. Learning with people from a variety of backgrounds encourages collaboration and fosters innovation, thereby benefitting all students. It also helps students to learn how to navigate adulthood in an increasingly diverse society. In addition, diversity and inclusivity efforts help to address the achievement gaps between races and economic groups. This ensures a thriving society and cultivates a vibrant on-campus community.

Notre Dame's students come from different geographical areas, as well as a variety of ethnic and socioeconomic backgrounds. According to data provided by Notre Dame, in 2017 34 percent of the total student body is ethnically diverse. Notre Dame has been working actively on increasing the diversity of the student body in the past decades. In the last decade, the diversity of Notre Dame's student body has increased 9 percentage points.

FIGURE 4.1 – STUDENT DIVERSITY AT NOTRE DAME

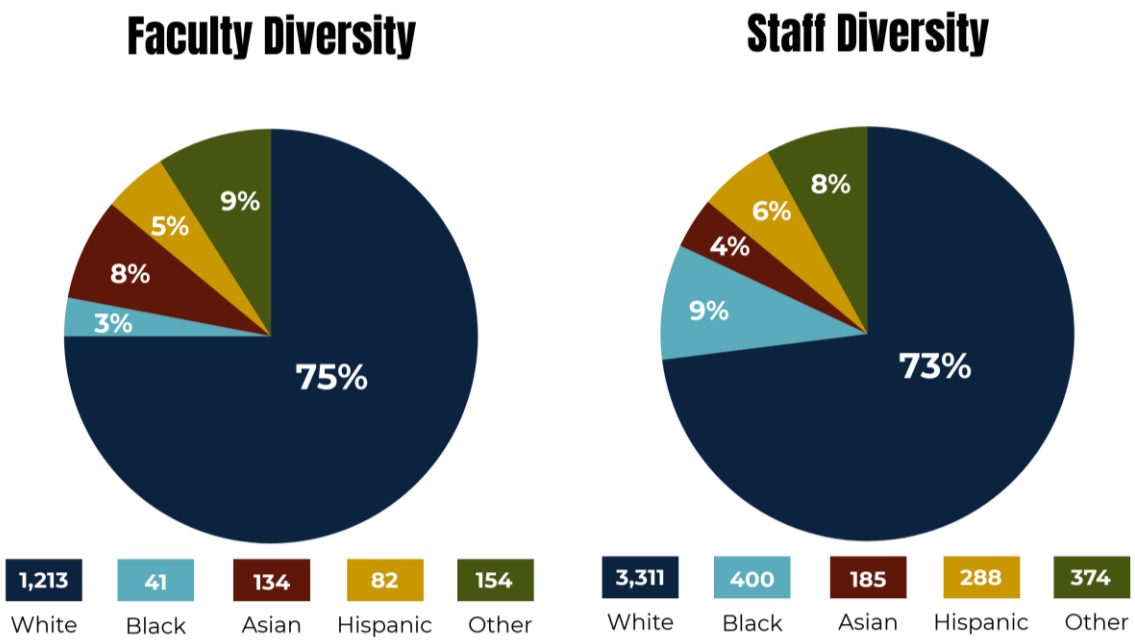


Source: Notre Dame (2017)

DIVERSE FACULTY AND STAFF

Diversity in employment makes Notre Dame a better institution and helps it to offer an excellent educational experience. Data provided by Notre shows that racial minorities make up 25 percent of the faculty workforce and 27 percent of the staff workforce.

FIGURE 4.2 – FACULTY AND STAFF DIVERSITY AT NOTRE DAME



Source: Notre Dame (2017)

In addition, Notre Dame has created a variety of programs and academic support to foster a diverse and inclusive spirit on campus. In 2017, the University organized staff diversity and *Inclusion Discussions* that allow staff to share their personal experiences and discuss ways to improve diversity and inclusivity within the University. Notre Dame also offers three workshops dedicated to enhance diversity awareness within its faculty body. Topics cover the following: onboarding, which primarily introduces new employees; multicultural competencies training, which explores diversity, multicultural competencies, macroaggressions, implicit and explicit bias and; *We Are All ND*, a four-hour long workshop for all staff in an effort to promote awareness on diversity and inclusion. These types of programs foster greater diversity within the campus and develop a culture that strives for greater inclusion in the workforce and society.

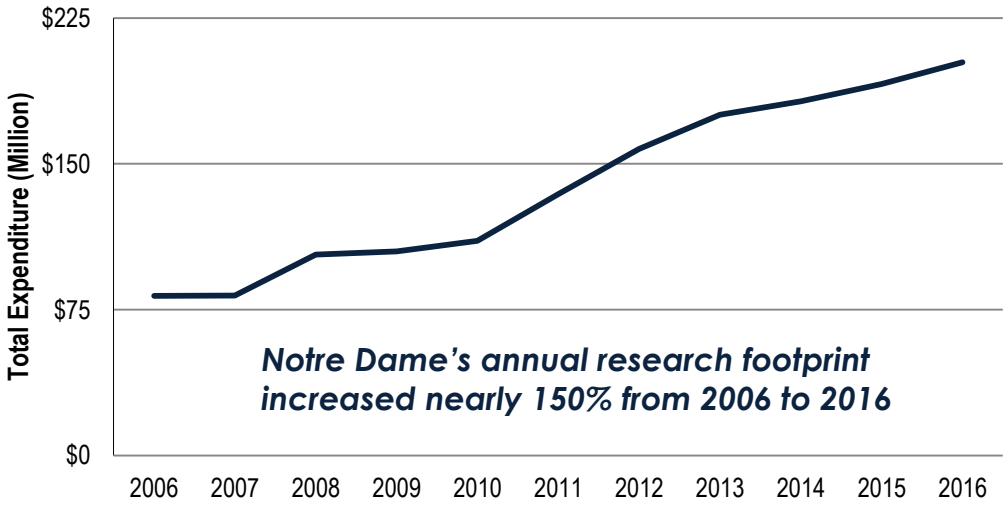
Notre Dame's efforts to create an inclusive and welcoming environment enable the University to hire and retain talents from diverse backgrounds. In 2016, Notre Dame ranked 6th among large organizations in *Best Places to Work in IT*, an annual ranking of 100 work environments for technology professionals by IDG's Computerworld.

4.4 RESEARCH FOOTPRINT

In line with Notre-Dame's values driven mission and as detailed in Notre Dame's Strategic Plan, Research and Scholarship are listed as one of Notre Dame's five goals, along with Catholic Character, Undergraduate Education, Stewardship, and External Engagement. Notre Dame research supports and encourages innovation in more than twenty core facilities, as well as in a number of key areas of research that align with the University's institutional priorities, including cancer, environmental change, and global health.

In the last 10 years, Notre Dame has more than doubled its research footprint to more than $200 million in 2016, including the University's investments in research. Research dollars attracted by Notre Dame not only generate important discoveries that advance the body of knowledge, but also bring significant economic activity to the South Bend-Elkhart region that otherwise would likely be deployed elsewhere. In addition to creating jobs for research staff and support personnel, it contributes to new product development and technology commercialization. Knowledge and technology transfers have resulted in commercial ventures that promote entrepreneurship, and job creation.

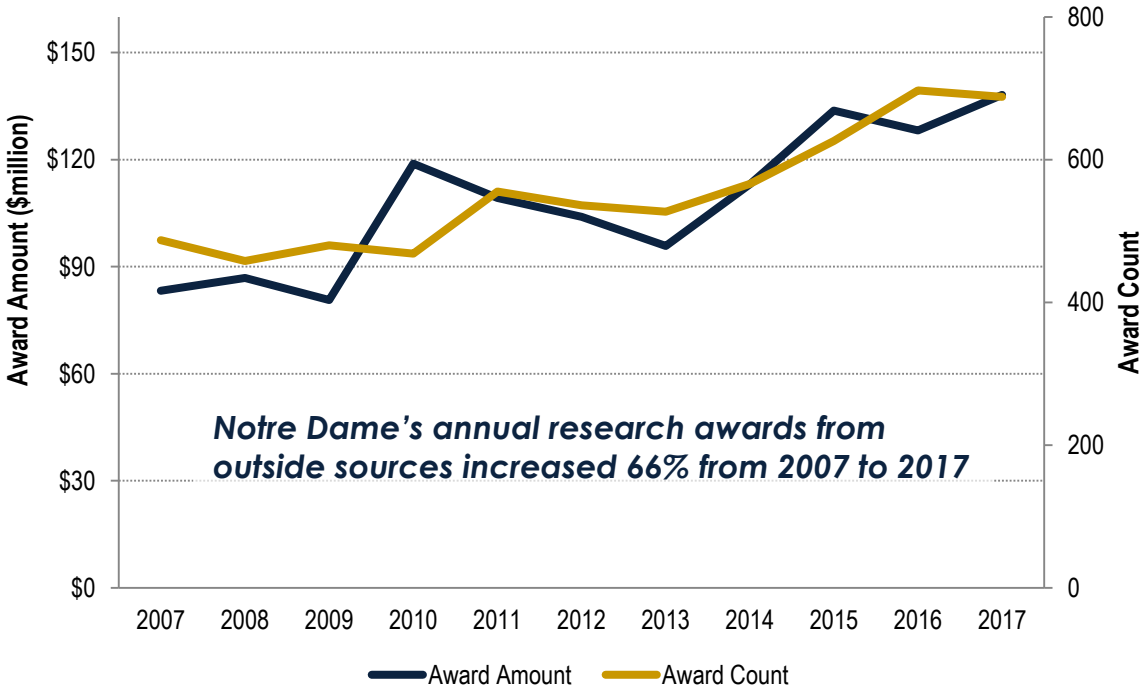
FIGURE 4.3 – TOTAL RESEARCH EXPENDITURES (2006-2016)



Source: Notre Dame (2017)

A major component of Notre Dame's annual research footprint is the significant volume of external research awards won by the University and its researchers. Data provided by Notre Dame shows that in FY2017, the University received more than $138 million in external research funding and reached a new record, surpassing the previous record of $134 million in FY 2015. The remainder of Notre Dame's research footprint is comprised of resources dedicated by the University itself, as a demonstration of its commitment to research and scholarship.

FIGURE 4.3 – TOTAL RESEARCH AWARDS RECEIVED



Source: Notre Dame (2017)

In FY2017, approximately 58 percent of the research awards came from federal funding, while 27 percent came from foundations or other sponsors, and 15 percent came from industry. All told, 99.5 percent of the external research funding is from sources outside Indiana, making Notre Dame's research program a major force for importing financial capital into the Indiana and South Bend-Elkhart regional economies.

99.5% of external research awards won by Notre Dame's researchers originated from sources outside Indiana.

Approximately 60 percent of all externally awarded research funding is spent within the three county region. That concentration of research activity strengthens the region's competitiveness for future human and financial capital. In addition, the diffusion of additional research activity throughout the state speaks to Notre Dame's predisposition for and ability to collaborate with others to leverage existing resources and advance human knowledge.

THE INDIANA CLINICAL AND TRANSLATIONAL SCIENCES INSTITUTE

Notre Dame's research collaborations with partners across the state and nation support the University's strategic priorities of partnerships and research for the public good. The Indiana Clinical and Translational Sciences Institute (CTSI) is one such example of strategic partnership that has yielded new breakthroughs, not limited to lifesaving biomedical solutions that can be delivered to a maximum number of people. Indiana CTSI represents a statewide collaboration between Purdue University, Indiana University and Notre Dame, which aims to advance translational research from scientific discovery to improved patient care. While enhancing the University's mission to be a powerful means of doing good in the world, the awards promote partnership with Indiana partner institutions.

Research with a Social Impact

Indiana CTSI's partnership with Notre Dame has given rise to new technologies at a breakneck pace. For instance, in 2016, Notre Dame Researchers received two of the first Global Health Pilot Projects Awards. One of the research projects focuses on reducing exposure from vector borne-diseases like malaria in Southern Zambia. This study will evaluate simple screening methods for outdoor cooking spaces, where many Zambian families spend their time, which exposes them to mosquitoes.



HARPER CANCER RESEARCH INSTITUTE

The Harper Cancer Research Institute (HCRI) conducts innovative and integrative cancer research to scale up cancer treatment services. HCRI uses a team-based approach that draws knowledge and expertise from various scientific fields by bringing together research groups from multiple disciplines. The institute highly values collaboration among multiple departments within the College of Science, College of Engineering and the College of Arts and Letters at Notre Dame as well as with the Indiana University School of Medicine-South Bend (IUSMSB).

The Department of Chemistry and Biochemistry recently received a grant of $4 million from the National Institutes of Health (NIH) to identify ways to engineer a patient's T cells to strengthen the immune system against attacks from cancerous cells. The team is working with scientists and researchers specialized in biophysics, immunology, and structural biology, while also collaborating with medicals schools at Loyola and Emory universities. Through this interdisciplinary approach, the research team will gather an enhanced understanding of the immune system and thereupon develop more specialized treatments to improve patient outcomes.



Several programs have been developed to step up collaborative research efforts within HCRI. The **Research Like a Champion** (RLAC) program is based on the idea of "students driving innovation in cancer research." Students are encouraged to develop innovative ideas that are not necessarily lab-based. RLAC tackles diverse research endeavors that benefit cancer patients on a global and regional scale. For example, a student-led team worked with health care providers in rural Tanzania, using a complex network analysis to improve referral rates and cancer patient monitoring. These programs connect Notre Dame's dual mission of imparting values and knowledge on its students, as students are using the University's educational and research resources to address societal challenges at the local, regional and global levels.

NOTRE DAME ENVIRONMENTAL CHANGE INITIATIVE

The Environmental Change Initiative (ND-ECI) at Notre Dame is a research entity where over 50 researchers from multiple disciplines including science, engineering, social science, public policy, business, and the nonprofit community address environmental questions and pursue innovations. The goal is to answer the urgent environmental questions with solutions that minimize trade-offs between human welfare and environmental health. One example is the National Science Foundation-funded "EAGER: The Implications of Interacting Land Use Legacies and Drought Cycles for Lake District Carbon Cycling," which is aimed to develop regional models to better predict lakes' impact on future climate.

ND-ECI has also collaborated with St. Joseph County Parks to form the Notre Dame Linked Experimental Ecosystem Facility, or ND-LEEF, which provides scientists with a 29-acre site to do large-scale environmental experiments in a field-like setting in a more controlled way. ND-LEEF houses two constructed experimental watersheds, each consisting of an interconnected pond, stream, and wetland. The site not only provides unique experimental environment for studying water quality and habitats, but also serves as a facility for environmental outreach to schools and other park visitors from St. Joseph County and surrounding communities.

THE RAFAT AND ZOREEN ANSARI INSTITUTE FOR GLOBAL ENGAGEMENT WITH RELIGION

The Rafat and Zoreen Ansari Institute for Global Engagement with Religion was created in 2017 by Rafat and Zoreen Ansari and their family who made a $15 million gift to Notre Dame for the creation of the institute. Housed in Notre Dame's new Donald R. Keough School of Global Affairs, the institute is dedicated to the study of religion around the world through research, teaching, outreach and interaction with religious communities worldwide. Faculty affiliated with the institute focus on studying ways that religions can inform global issues like migration, peacebuilding, and human development; the roles religion plays in crucial sectors such as health care, education, economy; and the distinctive contributions religion makes to the common good. The institute also

offers fellowships to graduate students and organizes conferences that create dialogues around pressing global issues.

> ***"The need for people of faith to focus on what unites us rather than on what divides us has never been more urgent. This extraordinary gift from an esteemed local Muslim family, longtime friends of Notre Dame, will allow us to bring together scholars of the first order to foster dialogue and deepen understanding. We are immensely grateful to the Ansaris for making this aspiration a reality."***
>
> ***— Father John I. Jenkins, C.S.C.***

COMMUNITY-BASED RESEARCH

Notre Dame has heavily invested in community-based research, which aims to bring academic and local knowledge to bear on complex social challenges through collaboration with community partners. The Center of Social Concerns also has a number of grants and awards dedicated to building and investing in community-based research partnerships.

A particularly impactful local community-based research initiative involves the Ganey Seed Grant, led by public health experts from the College of Science and the Eck Institute for Global Health. The initiative won funding in collaboration with St. Joseph County health officials to address the issue of lead poisoning in the community. The program not only investigates the potential sources of lead poisoning in St. Joseph County but also identifies children and families at risk in the area.

University researchers have also become increasingly involved in addressing food security within the South Bend community. The Center for Social Concerns recently awarded a grant to establish the South Bend Food Security Coalition, which includes members from almost 30 organizations. Notre Dame students have actively worked with board members to address four strategic priorities to provide healthier food options for local residents

Catholic Scholarship in Action

Through its integration of religious faith and reason in academic research, the Notre Dame College of Arts and Letters affirms that the Catholic faith serves as a foundation for all fields of study. It aims to foster a community of research and scholarship that further social justice and serve the common good. The College recently received a grant of $1.6 million from the John Templeton Foundation dedicated to training Catholic thought leaders to reflect and engage in dialogue on science and religion.



4.5 NOTRE DAME'S RESEARCH AND INNOVATION ECOSYSTEM

Scholarship and research are one component of the regional growth story; the logical next step of that story is how regional collaboration around innovation and entrepreneurship, often inspired by Notre Dame's academic pursuits, has yielded economic returns for the community. Notre Dame's research pipeline creates local entrepreneurs out of faculty and graduating students, and increasingly attracts local or new-to-the-area residents who choose to co-locate near Notre Dame to take advantage of the talent and resources that they bring to bear.

THE IDEA CENTER

Standing for Innovation, De-Risking and Enterprise Acceleration, the IDEA Center provides a support network that translates scientific concepts into commercial ventures and entrepreneurial activities. Aside from being an important resource for enriching the well-being of society, its presence promotes the South Bend region as a hot spot for technology and innovation.



INNOVATION PARK

While the IDEA Center is the fundamental resource for all commercialization and entrepreneurial activities at Notre Dame, Innovation Park gives Notre Dame inventors a home base. Innovation Park is a 95,000-square foot technology and entrepreneurship facility that provides a platform to connect aspiring young entrepreneurs with industry experts, advisors, and sources for capital. It provides access to core technical services and expertise for idea development, technology translation, business formation, and commercialization. Since 2009 when the Park opened, 59 new ventures have been launched and 26 companies are currently operational.



The second phase of Innovation Park includes the construction of the Thomas H. and Diane G. Quinn Hall for Innovation and Change. The new addition to Notre Dame's innovation infrastructure will have dedicated space for the IDEA Center and will be able to host 25 to 30 start-up companies.

IGNITION PARK AND THE RENAISSANCE DISTRICT



While outside the operations of the University of Notre Dame, Ignition Park and the Renaissance District are two important pieces of the South Bend-Elkhart region's innovation ecosystem.

- **Ignition Park** is a technology park within the Indiana State-Certified Technology Park network located on a part of the old Studebaker facility. Successful tenants include Data Realty, Transpo, and the Notre Dame Turbomachinery Facility. Companies formed at Innovation Park may choose to expand their operations at Ignition Park, and by doing so, gain access to a variety of support services and other benefits from being part of the same state-certified technology park.

- The **Renaissance District** is being redeveloped into the largest mixed-use technology campus in the Midwest; it demonstrates the natural synergies between Notre Dame's research enterprise and the anticipated demand for future tech space. Two Notre Dame-related companies, F-Cubed and CupPrint, are already tenants in the first building.

These innovation locations represent **a place-based strategy that has been implemented under the leadership of Father Jenkins, which has captured the present-day preference for co-locations of innovation assets—institutional, start-up, and corporate—and which has helped make South Bend an attractive destination for human and financial capital.** These efforts are already starting to pay dividends in terms of intellectual property output and commercialization events, as is described further in the rest of this section.

4.6 INTELLECTUAL PROPERTY OUTPUT

The tangible and monetized outcome of a rich knowledge-based community is intellectual property, an area in which Notre Dame is becoming increasingly competitive. The IDEA Center's Commercialization Engine group serves as a resource for researchers and faculty to advance their work into the marketplace. As of today, there have been around 1,000 invention disclosures received by the University, more than 220 patents issued, and 120 licenses executed. Notre Dame encourages faculty involvement in start-up companies based on technology they have developed. There are 46 start-up companies that have resulted from the licensing of Notre Dame technologies, twelve of which are students' start-up companies. It is important to note that **in the last year, Notre Dame's intellectual property output has accelerated, in part due to the culmination of a recent history of increased research funding awarded to the University.**

TABLE 4.2– NUMBER OF INVENTIONS, PATENTS AND LICENSES

Years	Invention Disclosures Received	Patents Filed	Patents Issued	Licenses Executed
FY16-17	73	142	26	21
Last 5 years	623	674	141	76
Last 10 years	719	1,046	194	104
Total (last 20 years)	1,013	1,326	224	120

Source: Notre Dame (2017)

Notre Dame has devoted significant time and resources to research, tech evaluation and development, and commercialization work, and in turn, it generates even greater returns for the University from the licensing of intellectual property.

Today, the IDEA Center has played a demonstrable role in helping Notre Dame researchers translate their basic research into intellectual property. The IDEA Center ensures that Notre Dame's growing research investments become important inventions that enter the market with a number of strategies.

- The Commercialization Engine identifies new technologies that may have commercial potential by helping researchers apply for patents and connecting with businesses (either established companies or new ventures) that might be interested in licensing Notre Dame technologies for commercial use.

- Grant-funding opportunities give student ventures access to external capital networks such as the IDEA Center Engine Fund, Elevate Ventures and others.

- A Maker Space at the Idea Center offers a comprehensive set of hand tools, 3D printers and resources with which to build a prototype.

4.7 COMMERCIALIZATION AND ENTREPRENEURIAL SUCCESSSES

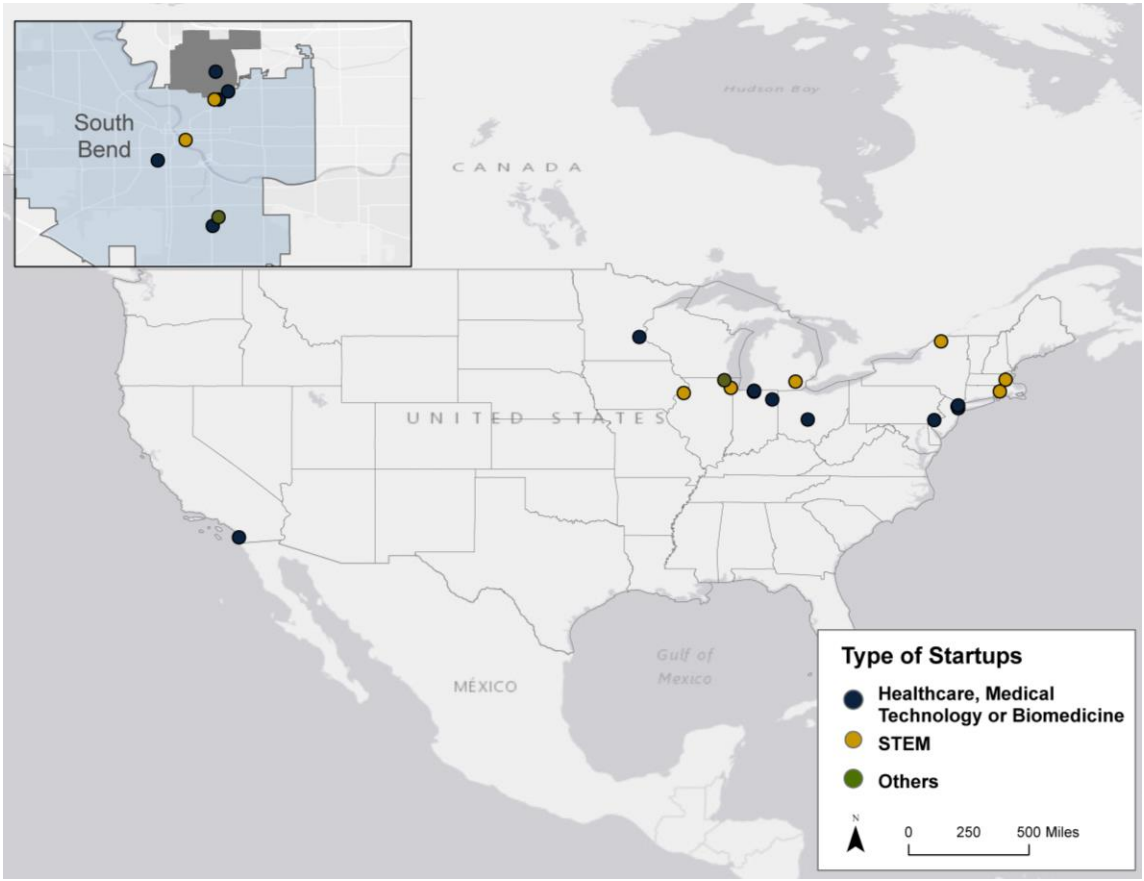
Research and innovation leads to the commercialization of intellectual property and catalyzes a vibrant regional entrepreneurship ecosystem, producing breakthroughs that can save lives and change the world. Commercialization of university-based research also plays a crucial part in creating new jobs and companies, attracting venture funding and human capital, and improving the region's economic competitiveness.

Fostering student engagement in innovation and entrepreneurship is the **ESTEEM program** (the Engineering, Science & Technology Entrepreneurship Excellence Master's Program), which places students with start-ups where they take positions of leadership at the intersection of

business and innovation. Students are equipped with technical skills that will better position them to launch new businesses or become innovators within large corporations.

Notre Dame is dedicated to transforming its technologies and innovations to products and services that will benefit the public. The dual approach of the IDEA Center providing the space, funding, technical services and expertise for idea development and Innovation Park serving as a meeting and "collision" space for faculty, students, entrepreneurs, investors, and industry innovators demonstrates a creative way to build the region's entrepreneurial community in an inclusive and engaging way. Additionally, and as a reflection of Notre Dame's values-driven ethos, many of the recent commercialization successes to come from the University's innovation ecosystem connect directly back to its Catholic-centric mission and emphasis on social good.

FIGURE 4.4 –SELECT RECENT NOTRE DAME START-UPS



Source: Notre Dame (2017)

Notably, 20 of Notre Dame's most recently established start-ups call the South Bend-Elkhart region home, 14 of which are located in Innovation Park. The fact that many new start-ups choose to stay close to Notre Dame and enrich the South Bend economy speaks to the local concentration of Notre Dame's innovation impact.

AgenDX Biosciences Inc., based in South Bend, Indiana, is an early stage molecular diagnostics company focused on providing accurate and cost-effective diagnostics and treatment to patients with pancreatic cancer. The start-up was founded during the 2014 McCloskey Business Plan Competition, where founder Ben Miller and his team won a grand prize for their proposed oral cancer detection test. Miller founded AgenDx in 2015.[12] AgenDX commercializes novel technologies licensed from Notre Dame's Center for Microfluidics and Medical Diagnostics and the Harper Cancer Research Center. In February 2018, the company announced that it closed its seed financing, raising a total of $1.5 million. Notre Dame is among the investors.

"They're working on a solution to provide diagnosis while the cancer is still treatable. That could ultimately impact so many lives, which is really incredible."
— Gavin Ferlic, entrepreneur-in-residence for Elevate Ventures (about AgenDX)

VIDA is a start-up company specializing in software and analysis services that identify and assess the treatment plan for lung disease, including lung cancer, emphysema, asthma and airway obstructive services. VIDA's informatics tools have been validated for clinical use in the US, Canada, European Union, and Australia. Advanced pulmonary analytics is offered at low cost

RaNeDis Pharmaceuticals formed with the objective to treat rare and metabolic diseases with the technology licensed from Notre Dame. The pharmaceutical company is at the development stage and is involved in creating an HDAC inhibitor that is targeted at increasing brain exposure for the treatment of rare genetic diseases.

Gigil is one example of a student-led start-up that is developing a medical device that will facilitate patients to self-administer injections of medicines. Mikaela Saugstad, Emily Russo and Marissa Koscielski, ESTEEM program students, are co-founders of the new business, based out of the IDEA Center. Diagnosed with rheumatoid arthritis, Saugstad has had to self-administer medication through an injection once a week. This difficult process inspired the three women to create Gigil. The team is currently building a business plan and an effective market strategy to take the business to the next level.

As noted, these examples are the end result of a **vibrant and inclusive intellectual community.** The University has become increasingly successful in securing out-of-state research dollars and, as a result, has accelerated its ability to translate human and financial capital into intellectual property outcomes and commercializable events by co-locating innovation assets in productive

[12] Caleb Bauer, "Economic strategy aims for 200 new start-up companies by 2025 in South Bend region." *South Bend Tribune.* 19 Feb 2018, Accessed 23 Feb 2018

facilities such as the IDEA Center and Ignition Park. These examples are also illustrative of a research philosophy that seeks to produce outcomes that maximize public benefit as much as commercial success.

4.8 A VIRTUOUS CYCLE OF INNOVATION

In today's knowledge-based and innovation-driven economy, the importance of research, innovation and entrepreneurship to regional economic competitiveness cannot be overstated. **Research and innovation converts good ideas into products and services that will improve the region's competitiveness, boost growth and create jobs. Financial and human capital will cluster in the regions where collaboration runs high and innovation is encouraged. In turn, smart entrepreneurs seek out places that are rich in innovation and anchored by a robust ecosystem of public, private, and not-for-profit institutions.**

Research universities play a particularly vital role in creating, cultivating, and coordinating this entrepreneurial activity. World-class research institutions are a fertile source of both scientific breakthroughs and entrepreneurial leaders. Universities' business incubation facilities and programming provide the support framework for those ideas and people to succeed. The success in universities' research and innovation will lead to the dynamism of attracting more talents and investments into the region.

The Regional Cities Initiative, established in 2015, is an alliance between 22 cities and towns and more than half a million people in Elkhart, Marshall and St. Joseph Counties. The Regional Cities submission represents the collaboration of more than 700 businesses, academic institutions in the region including ND, public and private leaders in the region and the Regional

ND Turbo: A Regional Economic Magnet



Notre Dame's investments create a virtuous cycle for the region, cultivating a concentration of research activity that then attracts additional human and financial capital. One example of that virtuous cycle is the Notre Dame Turbomachinery Laboratory (NDTL), which is a leading research and testing facility for advancing massive gas turbine engine technologies. Thanks to an array of public partners, which include the City of South Bend and the State of Indiana as well as private partnerships with industry leaders, the lab has been able to attract far greater investment in the region and today has a newly opened 28,000 square foot facility in Ignition Park.

In 2017, NDTL received nearly $7 million in research awards, which allows the lab to focus on research as well as workforce development. The expanded facility at Ignition Park has also enabled NDTL to accept additional research agreements with international companies like Williams International and Doosan Heavy Industries and Construction, creating additional employment opportunities and spillover impacts into the rest of the region and state.

Development Authority. The core vision is to rebuild Northern Indiana around high-tech and knowledge-based industries and to create opportunities by strengthening entrepreneurship, education and workforce development. The Renaissance District, a major project of this initiative, is set to be the largest mixed-use technology campus space. The Renaissance District is dedicated to entrepreneurship and STEM programming, housing multiple tenants specializing in advanced manufacturing, life sciences, technology, education, and workforce development, in addition to space for co-working and retail.

Notre Dame is a significant contributor to the South Bend-Elkhart region's innovation environment, through its cutting-edge research, its talented students and alumni, and in particular through its STEM programs. In the past decade, Notre Dame achieved significant growth in innovation and commercialization activities. The IDEA Center, Innovation Park and Ignition Park serve as cultivators for a range of programs, funds and facilities, encouraging entrepreneurship and technology transfer and helping to leverage to intellectual capital of the Notre Dame community. The South Bend-Elkhart region has a long history of innovative, entrepreneurial and creative activities since the 1850s. Companies such as Studebaker, Singer Sewing, and Honeywell laid the foundation for the region's economy back then. Today, Notre Dame's efforts and partnerships with the local community are ready to drive the engine for the local and state economy, and reshape and reinvigorate the region in the next 10 years.

"The University's tradition of excellence in research and commitment to address the complex issues facing society – guided by our faith and desire to remain true to our Catholic heritage – spurs us to think, speak and act in ways that will guide, inspire and heal … not just for our students and fellow followers of the Catholic faith, but for all of our neighbors in the nation and around the world."

— Father John I. Jenkins, C.S.C

5.0 IMPACT FROM WAGE PREMIUM

5.1 SECTION OVERVIEW

As detailed in the previous section, the University of Notre Dame produces direct economic impacts through its operating activities, not only by employing people and buying goods and services, but also by investing in community engagement and growing research and innovation work. This section explores yet another gain to the local and state economy, which results from the University's primary role of educating and credentialing students.

Economic and societal returns from education are vast. One aspect of these returns is the increased productivity and earning power of a workforce. Hence, to the extent that Notre Dame educates, credentials, and then retains students within the local, regional, and statewide economy, that translates into **enhanced earning potential** and therefore higher household income in those respective economies. Some of that additional household income is spent locally, producing additional economic activity and supporting local jobs and tax revenues.



The wage premium associated with Notre Dame's educating and credentialing means **$168 million** more in earnings in Indiana.

Using alumni data provided by Notre Dame and external sources, it is estimated that Notre Dame's alumni who live and work in the state of Indiana earn an aggregate $168 million in annual wage premium, due to obtaining a degree and to the particular premium associated with Notre Dame. This translates into $160 million in additional household spending in the state economy that supports 1,100 jobs and nearly $8 million in state tax revenues. Beyond these economic impact amounts is the social impact Notre Dame alumni produce in their local communities. For their educational experience at Notre Dame has not only allowed them to have higher earnings, but also enabled them to make broader contributions to community and society as teachers, social workers, and thought leaders.

5.2 CONCEPT BEHIND WAGE PREMIUM

The link between educational attainment and earnings power is well-established, and a wage premium associated with additional education is often conceptualized and calculated from the

perspective of the student, who can compare the costs associated with various educational (or non-educational) options with the expected return. This analysis utilizes this framework to estimate the gain not to the student, but rather to city and state economies. Additional earnings attributable to Notre Dame within these geographies are estimated, and translated into additional spending power within the local economy, which supports local employment and earnings.

Estimating the magnitude of wage premium impacts from Notre Dame on the volume of earnings and associated household spending within Notre Dame and South Bend, St. Joseph County, the three county region, and the state of Indiana proceeds in three steps:

- First, the number of Notre Dame alumni in the workforce are estimated, detailed by educational attainment level and geography;
- Next, the annual wage premium associated with Notre Dame for each of those attainment levels is estimated;
- Finally, these two calculations are combined, multiplying the number of alumni at each attainment level by the wage premium for that level to yield an estimate of the aggregate annual wage premium associated with Notre Dame.

This calculation relies primarily on data provided by Notre Dame, as well as federal data sources where appropriate. Appendix B provides a more detailed description and discussion of the underlying methodology and calculations reviewed in this section.

5.3 DIRECT WAGE PREMIUM

Data provided by Notre Dame shows that of the nearly 135,000 active members in the alumni database, about 3,000 live within Notre Dame and South Bend, about 5,000 live in the three county region, and approximately 10,000 live in the state of Indiana. Of those living within Indiana, it is assumed that 72 percent are currently employed (as opposed to retired, unemployed, or otherwise out of the workforce).[13] Applying this proportion evenly across geographies, it is estimated that approximately 97,000 Notre Dame alumni are currently employed, of which 2,200 live within Notre Dame and South Bend, 3,400 live in St. Joseph County, 3,700 live in the region, and 7,200 live in Indiana (see Table 5.1).

[13] Based on the Bureau of Labor Statistic's employment-population ratio

TABLE 5.1 – GEOGRAPHIC DISTRIBUTION OF NOTRE DAME ALUMNI IN THE WORKFORCE

	Est. Total Employed Alumni	ND + SB	St. Joseph County	Three County Region	Indiana
Working Alumni with Bachelor's degree	83,164	1,804	2,699	2,876	5,708
Working Alumni with Advanced degree	13,739	427	687	781	1,480
Est. Total Working Alumni	**96,903**	**2,231**	**3,386**	**3,657**	**7,188**

Source: Notre Dame (2017), Bureau of Labor Statistics (2017), Econsult Solutions (2018)

The aggregate increase in the earning potential within each geography can be estimated as a function of the increases in educational attainment of the workforce. Based on a combination of federal data sources, the average annual wage premium attributable to the increased educational attainment for Notre Dame alumni is estimated to be $23,759 for bachelor's degree holders and $21,872 for advanced degree holders within Indiana.[14]

These premiums are applied to the number of Notre Dame degree holders estimated to be working within each geography by degree level to arrive at an aggregate annual wage premium, which represents the additional household income generated by Notre Dame alumni as a result of the education and credential they received from Notre Dame. This aggregate annual wage premium is estimated to sum to approximately $42 million within Notre Dame and South Bend, $71 million within St. Joseph County, $76 million in the region, and $168 million in the state of Indiana (Table 5.2).

TABLE 5.2 – REGIONALLY INCLUSIVE AGGREGATE ANNUAL WAGE PREMIUM ASSOCIATED WITH NOTRE DAME ALUMNI IN THE WORKFORCE ($M)

Degree Level	ND + SB	St. Joseph County	Three County Region	Indiana
Bachelor's	$34.0	$56.4	$59.6	$135.6
Advanced	$8.3	$14.6	$16.5	$32.4
Est. Total Working Alumni	$42.3	$71	$76.1	$168.0

Source: Notre Dame (2017), Bureau of Labor Statistics (2017), Econsult Solutions (2018)

[14] See Appendix B for additional detail on how wage premium by degree type was calculated.

5.4 ECONOMIC IMPACT FROM WAGE PREMIUM

The additional earnings Notre Dame alumni enjoy because of the education and credentialing they received at Notre Dame is of direct and consequential impact to those alumni. The wage premium experienced by Notre Dame alumni produces a spillover impact to the local economies they participate in, partly because alumni are able to contribute to those economies at a higher level (which is reflected in the higher compensation levels they receive for those contributions) and partly because alumni have more disposable income to spend within those economies. Now, not all of this household income is immediately spent in the local economy — some of it goes to savings or taxes — but enough of it is circulated locally to have a meaningful impact on the local economy in terms of economic activity, jobs supported, and tax revenues generated. The effects of this additional household spending are estimated to generate on an annual basis:

- $37 million in total economic output in the South Bend economy, supporting about 100 direct, indirect, and induced jobs and $11 million in earnings each year;
- $63 million in total economic output in St. Joseph County, supporting about 400 direct, indirect, and induced jobs and $18 million in earnings each year;
- $67 million in total economic output in the regional economy, supporting about 500 direct, indirect, and induced jobs and $19 million in earnings each year;
- $160 million in total economic output in the state economy, supporting about 1,100 direct, indirect, and induced jobs and $44 million in earnings each year.

TABLE 5.3 – ANNUAL ECONOMIC IMPACT ATTRIBUTABLE TO NOTRE DAME WAGE PREMIUM EFFECTS WITHIN NOTRE DAME AND SOUTH BEND, ST. JOSEPH COUNTY, REGION, AND INDIANA

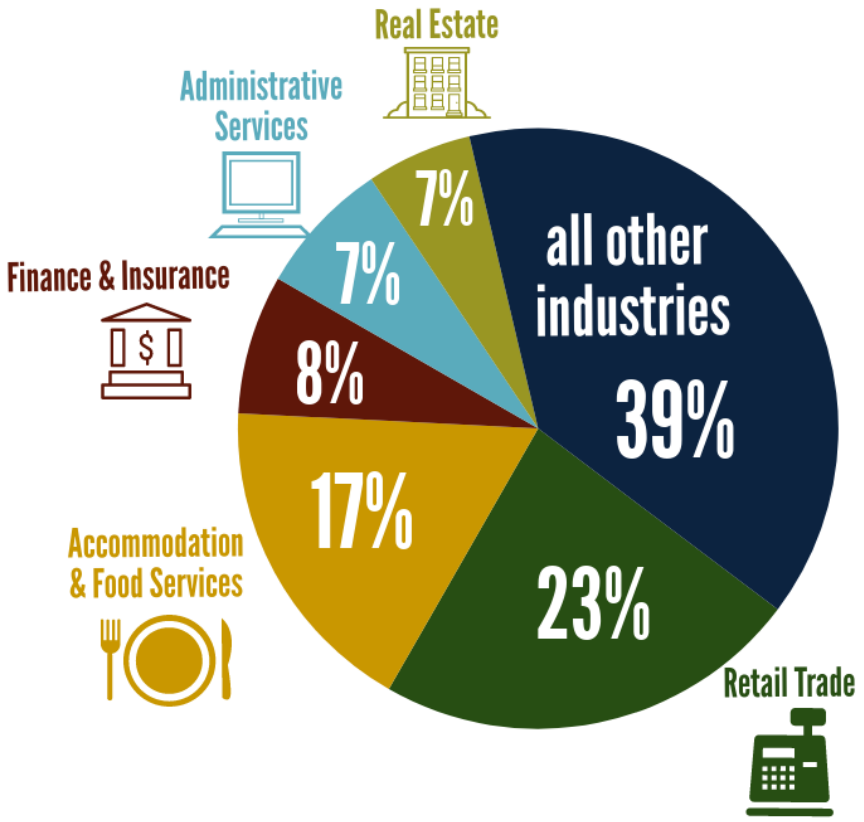
Economic Impact	ND + SB	St. Joseph County	Three County Region	Indiana
Direct Wage Premium ($M)	$42	$71	$76	$168
Total Output ($M)	**$37**	**$63**	**$67**	**$160**
Employment	**100**	**400**	**500**	**1,100**
Earnings ($M)	**$11**	**$18**	**$19**	**$44**

Source: Notre Dame (2017), Bureau of Labor Statistics (2017), Econsult Solutions (2018)

5.5 INDUSTRY DISTRIBUTION OF ECONOMIC IMPACT FROM WAGE PREMIUM

The portion of Notre Dame alumni's additional household income that is spent back into the state economy supports a number of industries, befitting the types of expenditures that are typically made by a household from its earned income. Hence, a high number of jobs in sectors such as retail, accommodation and food, and finance and insurance are supported by the higher aggregate household income enjoyed by Notre Dame alumni (see Figure 5.1).

FIGURE 5.1 – INDUSTRY DISTRIBUTION OF EMPLOYMENT IMPACT OF NOTRE DAME'S AGGREGATE WAGE PREMIUM WITHIN INDIANA



Source: Notre Dame (2017), IMPLAN (2015), Econsult Solutions (2017), Piktochart (2017)

5.6 TAX REVENUE IMPACT FROM WAGE PREMIUM

In addition to economic impacts, the local and state governments benefit from added taxes generated directly and indirectly from the wage premium associated with Notre Dame graduates. The higher wage paid to these graduates represents a direct gain in terms of personal income tax, as well as indirectly from income, sales and business taxes generated by alumni spending. Combined, the State of Indiana gains about $7.7 million each year in tax revenues from the wage

premium associated with Notre Dame alumni (see Table 5.4). The majority of this tax revenue comes from direct income taxes paid by the Notre Dame alumni to the State of Indiana government.

TABLE 5.4 – FISCAL IMPACTS OF THE WAGE PREMIUM ASSOCIATED WITH THE UNIVERSITY OF NOTRE DAME IN SOUTH BEND AND THE STATE OF INDIANA (IN $ MILLIONS)

Tax Type	South Bend	State of Indiana
Income Tax	$0.8	$5.5
Sales Tax	-	$2.0
Business Tax	-	$0.2
Total Tax Revenue	**$0.8**	**$7.7**

Source: Notre Dame (2018), Econsult Solutions (2018), IMPLAN (2015)

5.7 THE NOTRE DAME DIASPORA

The aggregate wage premium earned by Notre Dame alumni who stay local produces a significant impact on the South Bend, regional, and statewide economies. However, most Notre Dame alumni live and work out of state. Their professional and social impacts are felt in communities around the world. This is of benefit to the region's reputation because alumni carry the Notre Dame name to the four corners of the world and practically because Notre Dame graduates enrich the regional economy by making alumni donations and by returning to the area for various events. Furthermore, as this sub-section demonstrates, Notre Dame is a net talent creator for the region, because while the vast majority of Notre Dame alumni go elsewhere upon graduation, an even greater proportion of incoming students are non-local.

Notre Dame draws students from their immediate region as well as from outside the region, both of whom benefit the city and the state. The majority of the 12,500 students enrolled in 2017 are from outside the region: 98 percent from outside of South Bend-Elkhart region, 93 percent from outside Indiana, and 12 percent come from outside of the US (Table 5.5). It is good for regions, which have invested in the primary and secondary education of their children, to retain that human capital for four or more years and then to be in a better position to retain that human capital beyond the college years. Furthermore, it is also good for regions to draw in students from outside the region, whose living expenses during their college years will support local businesses and strengthen local tax bases.

TABLE 5.5 – STUDENT ENROLLMENT BY GEOGRAPHY

	South Bend	Three County Region[15]	Indiana[16]	Outside Indiana	Total
Student Count	190	232	898	11,569	**12,467**
Student Percent	1.5%	1.9%	7.2%	92.8%	**100.0%**

Source: Notre Dame (2017)

Alumni data provided by Notre Dame showed that there are approximately 3,000 graduates of Notre Dame who live in South Bend, and over 5,000 graduates choose to live in the three county region. More than 7 percent of graduates live in the state of Indiana (see Table 5.6). Those graduates are enriching the state economy through their participation in the state workforce, through their household spending, and through paying local and state taxes, which is discussed further in the ensuing section. However, those graduates who choose to go to other parts of the world still enrich the regional economy. They do so by maintaining a lifelong tie to the area, returning for alumni events, and making financial contributions to their alma mater, which represents an influx of economic activity for the region. More broadly, their intellectual and societal contributions to their part of the globe reflect positively on their alma mater as a place that produces alumni who make a difference in the world.

TABLE 5.6 – ALUMNI DISTRIBUTION BY GEOGRAPHY

	South Bend	Three County Region[17]	Indiana[18]	Outside Indiana	Total
Alumni Count	3,070	5,043	9,936	124,157	**134,093**
Alumni Percent	2.3%	3.8%	7.4%	92.6%	**100.0%**

Source: Notre Dame (2017)

As regions compete for talent, higher education institutions play an important role in attracting in students and in retaining them after graduation. Notre Dame draws the vast majority of its students from outside the region, and the vast majority of its alumni do not live nearby. This is typical of elite institutions with global reputations. As stated above, it is good for a region when a university educates both locals and non-locals, and it is also good for a region when a university retains its graduates in the area and when it sees them depart to thrive in other parts of the world. **However, it is also noteworthy that, at a local, regional, and statewide level, Notre Dame is a net talent attractor, in that it retains a higher proportion of alumni than the proportion of students it brings in** (Table 5.7).

[15] Three County Region includes South Bend.
[16] Indiana State includes Three County Region and South Bend.
[17] Three County Region includes South Bend.
[18] Indiana State includes Three County Region and South Bend.

TABLE 5.7 –NET DIFFERENCE BETWEEN STUDENT DISTRIBUTION AND ALUMNI DISTRIBUTION BY GEOGRAPHY

	South Bend	Three County Region	Indiana
Student Percent	1.5%	1.9%	7.2%
Alumni Percent	2.3%	3.8%	7.4%
Net Gain to Area	**+0.8%**	**+1.9%**	**+0.2%**

Source: Notre Dame (2017)

5.8 WHY IMPACT FROM WAGE PREMIUM MATTERS

One of Notre Dame's main goals is to educate and credential its students to prepare them for a productive life post-graduation. In doing so, it affords students the opportunity to earn higher wages and increase their household earnings.

At a macro level, **the presence of Notre Dame has a significant impact on the composition, educational attainment, and skill level of the local workforce.** While the benefits of higher education go beyond what can be quantified through increased wages alone, it is important to recognize this "wage premium" in terms of its annual economic impacts for the regional economy. The wage premium generated by Notre Dame alumni represents the value of the University's educational offerings for the local economy. In credentialing its students, Notre Dame serves an important role in expanding the knowledge base within South Bend, St. Joseph County, the three county region, and Indiana.

Notre Dame therefore plays an important role both in retaining many of its talented students and in importing talented students from elsewhere. In today's knowledge-based global economy, returns to education are increasing, as is the important role of having a talent workforce to the success of a region as it competes with other regions. Therefore, Notre

enFocus: Bolstering Regional Talent

enFocus is a non-profit supported by Notre Dame that focuses on matching recent graduates with Indiana based organizations. The underlying goal of enFocus is to combat the net outflow of high-skilled college graduates from Indiana after graduating; giving graduates the opportunity to develop solutions for the South Bend and Elkhart County communities through on-year fellowships. During their fellowship, enFocus fellows spend about 70 percent of their time working as sponsored "problem solvers" for the South Bend and Elkhart County areas, with the remaining 30 percent of time dedicated to assisting community development initiatives or developing their own entrepreneurial ideas. Since its founding, enFocus has produced 22 graduates, helped found 6 companies, and produced $20 million in additional value to the South Bend and Elkhart communities.



Dame's role in the overall economic competitiveness of the state of Indiana and of its home region will only grow as it plays its part in producing and retaining educated alumni locally.

Importantly, the estimates produced in this section understate Notre Dame's true impact to society. The calculations in this section only account for the higher earnings enabled by an education and credential from Notre Dame. As such, they do not account for the fact that Notre Dame alumni are not only able to earn more money, but in some cases are creating new jobs for others through entrepreneurial ventures, such as enFocus (see inset on previous page). Furthermore, alumni end up in career tracks that are strategically important to the state economy, such as business, engineering, and the sciences, which by increasing the intensity of human talent in those areas strengthens the vibrancy and attractiveness of the state economy.

6.0 IMPACT FROM STUDENT, VISITOR, AND RETIREE SPENDING

6.1 SECTION OVERVIEW

The University of Notre Dame produces regional economic impact through its operations, which include its core functions of academics and research as well as its local engagement initiatives. It also positively impacts the region by drawing outside spending into the area. Notre Dame attracts students and visitors from around the world into the region. The primary benefit to these students and visitors is the education and cultural experiences that they receive. However, from the perspective of the local and state economy, these students and visitors have a significant impact in the local economy due to the spending power they bring into the area.



Large portions of this spending, such as student tuition and on-campus housing, accrue to Notre Dame and are already reflected in the annual operations reviewed in Section 2. However, a significant portion of spending by students and visitors attracted by Notre Dame takes place off campus in nearby neighborhoods and throughout the region. This portion circulating through the local economy is referred to as ancillary spending, which represents economic opportunities for local merchants in categories like food and beverage, retail, and lodging.

Unlike Section 2, which covered spending by the University itself and therefore accounting for at a higher level of precision, impacts from these ancillary spending amounts are based on a combination of direct information from Notre Dame and assumptions anchored by research. Where possible, a conservative approach was taken to arrive at these estimates, in order to avoid overstating these amounts. **In aggregate, the economic impact of ancillary spending by students and their visitors in Indiana is estimated to be over $101 million in total output, supporting nearly 800 jobs, and generating $2.1 million in state tax revenues annually.**

This section is devoted to the economic impact of ancillary spending derived from Notre Dame students and their visitors. In addition, this section provides illustrative examples of retirees that choose to live in the area due to the cultural and educational amenities made available by the University (see Appendix B for more detail on how student and visitor spending was estimated). The subsequent section (Section 7) is devoted to the economic impact of ancillary spending from visitors who travel to Notre Dame for athletic, alumni, cultural, and other events.

Before delving into the direct, indirect, and induced effects of student and visitor spending, it is important to realize the significant non-economic benefits of this spending. While the volume of economic activity by students and visitors is vital to the local economy—supporting jobs and adding to the tax base—the large and diverse populations drawn into the area also make it

possible for the region to have a variety of retail, dining, and residential options. This kind of quantity and quality of choice is increasingly valued as a quality of life amenity for year-round residents.

6.2 STUDENT SPENDING

Notre Dame attracts a selective student body drawn to the University for its unique combination of academic excellence, Catholic values, and vibrant campus life. Because much of Notre Dame's student body and their associated visitors originate from around the country and globe, the spending power that they bring is an import into the city, St. Joseph County, the three county region, and the state.

In the fall of 2017, approximately 11,916 students were enrolled and attended classes on campus, with 6,950 students living in on-campus housing, 4,754 off-campus, and 212 students commuting from home.[19] While specific spending profiles will vary for each individual student, the University's financial aid office provides "cost of attendance" data on an annual basis that reflects estimated spending for a typical student, including both tuition and non-tuition spending. This information is utilized to develop average spending profiles per student for on-campus, off-campus, and commuter students.

Conservative estimates were made for the proportion of ancillary spending not directly captured by Notre Dame. For example, students who live on campus pay room and board directly to the University, and that economic impact, and that economic impact is therefore captured within

Student Spending in the Local Economy: Irish1Card Domer Dollars

In order encourage students, faculty, and staff to frequent their locations, numerous local off-campus merchants have partnered with the University to allow students to use their campus ID card—the Irish1Card—to make purchases at their stores. Notre Dame markets these locations on their website giving these businesses a higher level of recognition in the Notre Dame community. Local restaurants include Bar Bici Italian Street Food, Strikes & Spares Entertainment Center, and Kilwin's Chocolates and Ice Cream.



[19] At any given time, about 4 percent of Notre Dame students are studying abroad. Therefore, since their spending is not taking place locally, they were excluded from this analysis. Note that while "commuter" undergraduate students typically refers to students living at home with their parents, "commuter" graduate students are more often adults residing within the region for another purpose (such as their employment) who are also taking graduate classes, Expenditures like housing and food are not attributable to the institution in these instances because it is assumed that the student would already have been living in the region independent of their enrollment. For this reason, part-time students represent a reasonable proxy for this category in the case of graduate students.

Notre Dame's operating budget and should be excluded from ancillary spending. The model captures the rent paid by students who live "off-campus" within South Bend in non-Notre Dame housing but does not include the rent paid by commuter students. Commuting students are those who live at home and would likely be paying the same rent or living in the same location regardless of their enrollment at Notre Dame. Therefore, the rent paid by commuting students cannot be attributed to Notre Dame and was excluded from the calculation. However, they do contribute other expenditures in categories such as transportation and food.

This approach yields an annual average spending estimate of $18.4 million for on-campus students, $79.7 million for off-campus students, and $0.5 million for commuter students, for an aggregate spending of $98.5 million per year beyond the amounts paid to Notre Dame (see Table 6.1).

TABLE 6.1 – ANNUAL ANCILLARY SPENDING BY UNIVERSITY OF NOTRE DAME STUDENTS BY STUDENT TYPE[20]

Student Type	Number of Students	Per Student Ancillary Spending	Aggregate Ancillary Spending ($M)
On-Campus	6,950	$2,641	$18.4
Off-Campus	4,754	$16,759	$79.7
Commuters	212	$2,355	$0.5
Total	**11,916**		**$98.5**

Source: Notre Dame (2017), NCES (2017), Econsult Solutions (2018)

Notre Dame students spend **$82 million** within the region every year.

To appropriately model ancillary spending, it is necessary to determine the geographies where the spending takes place, as not all ancillary student spending occurs in South Bend or even Indiana. For example, a significant and growing volume of retail purchases takes place online. In other cases, students may spend a portion of their disposable income with merchants outside of the state, which largely does not positively impact the state economy. It is important to note, however, that due to the international draw of the University, many of the dollars spent by students and their visitors locally come from all over the world and, therefore, would not have occurred in state but for Notre Dame's presence.

Based on relevant industry averages and conservative assumptions, this downward adjustment is made to the estimates of student spending. It is estimated that, of the $98.5 million in ancillary spending by Notre Dame students each year, approximately $60.8 million is captured within the local

[20] See Appendix B for the ancillary spending methodology.

economy, $75.2 million is captured in St. Joseph County, $81.7 million is captured in the region, and $86.7 million is captured in Indiana (see Table 6.2).

TABLE 6.2 – AGGREGATE ANNUAL ANCILLARY SPENDING BY NOTRE DAME STUDENTS WITHIN NOTRE DAME AND SOUTH BEND, ST. JOSEPH COUNTY, THE REGION, AND INDIANA

Student Type	ND + SB	St. Joseph County	Three County Region	Indiana
On-Campus	$6.4	$8.9	$10.7	$11.6
Off-Campus	$54.4	$66.1	$70.8	$74.8
Commuters	$0.1	$0.2	$0.2	$0.2
Total	**$60.8**	**$75.2**	**$81.7**	**$86.7**

Source: Notre Dame (2017), NCES (2017), Econsult Solutions (2018)

6.3 VISITOR SPENDING

By far the largest proportion of ancillary spending comes from students, but a wide range of visitors of those students also bring dollars into the regional economy and should therefore be accounted for as well. Throughout the academic year and over the summer, Notre Dame attracts thousands of visitors to its campus. Many of these visitors come from outside of the region and spend money at local hotels and restaurants, helping to support employment and generate tax revenues for the city and the state.

To accurately estimate aggregate visitor spending, it is necessary to develop spending profiles of the various types of visitors, recognizing that not all visitors have the same economic footprint. Based on the reason for visit, duration of trip, distance traveled, event type, and visitor age, unique spending pattern behaviors were created. This visitor spending analysis accounts for the following visitor types:

- ***Prospective and admitted students*** include all students and families who visit the admissions office prior to applying or attending.
- ***Visitors of students*** include friends and family members who come to campus to see a student, including move-in and move-out.
- ***Junior Parents Weekend visitors*** include all family members of current students who come to attend the Junior Parents Weekend held on campus.
- ***Commencement visitors*** include all family and friends who attend Commencement.



As with the calculation of student spending, estimates

reflect only ancillary spending not captured within Notre Dame's operating budget, and only the portion estimated to be captured within the geographies of interest. Note also that adjustments are made to exclude Notre Dame student attendance at various events and attractions, since student spending is separately accounted for within this analysis (Section 6.2).

Regional Tourism Growth

The Embassy Suites project is part of the Eddy Street Commons development across the street from the University of Notre Dame. It is one of three new hotels set to open within a mile-and-a-half of the University. The addition of these hotel properties demonstrates a strong demand for year-round overnight stays in South Bend, not just for football weekends, and a growing appreciation for the South Bend-Elkhart region as a popular travel destination.



Source: Cooper Carry (2018)

In total, visitors associated with Notre Dame are estimated to generate approximately $9.6 million in annual ancillary spending within Notre Dame and South Bend, $10.3 million within St. Joseph County, $11.1 million within the region, and $11.8 million within Indiana (see Table 6.3).

TABLE 6.3 – AGGREGATE ANNUAL SPENDING BY UNIVERSITY OF NOTRE DAME VISITORS

Visitor Type	Attendees	Visitors per attendees	Spending per Visitor	Total Spending ($M)
Prospective Students	23,800	2	$126	$9.0
Admitted Students	1,200	2	$126	$0.5
Move in / Out	2,100	0	$126	$0.3
Junior Parents Weekend	4,000	0	$126	$0.5
Commencement	24,000	0	$126	$3.0
Total	**55,100**		**$126**	**$13.3**
Within ND + SB ($M)				$9.6
Within St. Joseph County ($M)				$10.3
Within the region ($M)				$11.1
Within Indiana ($M)				$11.8

Source: Notre Dame (2017), Econsult Solutions (2018)

NOTRE DAME VISITORS AND THE REGION

While students and their visitors come to South Bend for the University, Notre Dame promotes many off-campus attractions for their visitors during their stay, making Notre Dame one of the region's biggest tourist draws but also one of the region's biggest tourism promoters. From the South Bend Chocolate Company and the South Bend Museum of Art to the Four Winds Casino and manmade whitewater rafting in downtown South Bend, the city offers plenty of attractions and events for visitors during their stay, increasing spending in the local economy and supporting a variety of businesses.

While many of these visitors support small businesses within South Bend, attractions for visitors are not limited to merely the areas directly around the campus. To the south of campus, in nearby Marshall County, students and visitors to Notre Dame can easily access Indiana's second largest natural lake for fishing, swimming, waterskiing, and boating; attend the annual blueberry festival; or take a drive in the countryside to see over 75 barns emblazoned with giant quilt patterns along the region's 150-mile quilt trail. In Elkhart County to the east, visitors can explore the area's Amish country or take a stroll through the historic Wellfield Botanic Gardens. In other words, the visitor spending categories reflected in this sub-section represent additional demand for a wide range of businesses throughout the region – restaurateurs, hotels, and tourist attractions – and hence Notre Dame is an important part of the region's promotional efforts to outside visitors.

"Visitors to the seven-county area can visit a Porter County beach in the morning, attend a University of Notre Dame sporting event in the afternoon and nestle in at an Amish Country bed and breakfast for the night."[21]

—Northwest Indiana Times



While the region around Notre Dame and South Bend draw visitors to the area for various attractions, the presence of the University brings additional people into the area who may have otherwise never visited the three county region.

6.4 ECONOMIC IMPACT FROM STUDENT AND VISITOR SPENDING

Spending by Notre Dame's students and their visitors on categories such as lodging, dining, retail, and transportation translate into significant revenues for business owners in the City of South Bend as well as throughout the region. The combined ancillary spending by students and their visitors yields roughly $70.5 million in spending within Notre Dame and South Bend, nearly $85.5 million within St. Joseph County, about $92.8 million within the region, and approximately $98.5 million within Indiana.

However, it is important to adjust for the fact that some of that spending immediately leaves the region and therefore does not have a multiplier effect within the regional economy. For example, a large proportion of retail spending goes to manufacturers and wholesalers, most of which are outside the region, and so the modeling approach used in this report conservatively includes only the retail margin (i.e. the difference between the purchase price for the retailer and the sales price for the customer).

Based on this adjustment, the amount of spending included in our analysis is $48.3 million within Notre Dame and South Bend, $58.5 million in St. Joseph County, $63.5 million within the region, and $67.4 within Indiana (see Table 6.4).

[21] Joyce Russel, "Northern Indiana billed as cool destination." *Northwest Indiana Times,* 10 May 2017, Accessed 8 Mar 2018

TABLE 6.4 – AGGREGATE ANCILLARY SPENDING BY NOTRE DAME STUDENTS AND VISITORS BY GEOGRAPHY ($M)

Type	ND + SB	St. Joseph County	Three County Region	Indiana
Students	$60.8	$75.2	$81.7	$86.7
Visitors	$9.6	$10.3	$11.1	$11.8
Total	**$70.5**	**$85.5**	**$92.8**	**$98.5**
Minus Non-Modeled Amount	$22.1	$27.0	$29.3	$31.1
Modeled Amount	**$48.3**	**$58.5**	**$63.5**	**$67.4**

Source: Notre Dame (2017), NCES (2017), Econsult Solutions (2018)

This influx of ancillary spending by students and visitors has a multiplier effect throughout the region, producing the following annual economic impacts (see Table 6.5):

- $62 million in total output, supporting 400 jobs and $12 million in earnings within Notre Dame and South Bend;
- $83 million in total output, supporting 600 jobs and $17 million in earnings within St. Joseph County;
- $92 million in total output, supporting 700 jobs and $18 million in earnings within the region;
- $101 million in total output, supporting 800 jobs and $20 million in earnings within Indiana.

TABLE 6.5 – ESTIMATED ANNUAL ECONOMIC IMPACT FROM NOTRE DAME STUDENT AND VISITOR SPENDING WITHIN NOTRE DAME AND SOUTH BEND, ST. JOSEPH COUNTY, THE REGION, AND INDIANA

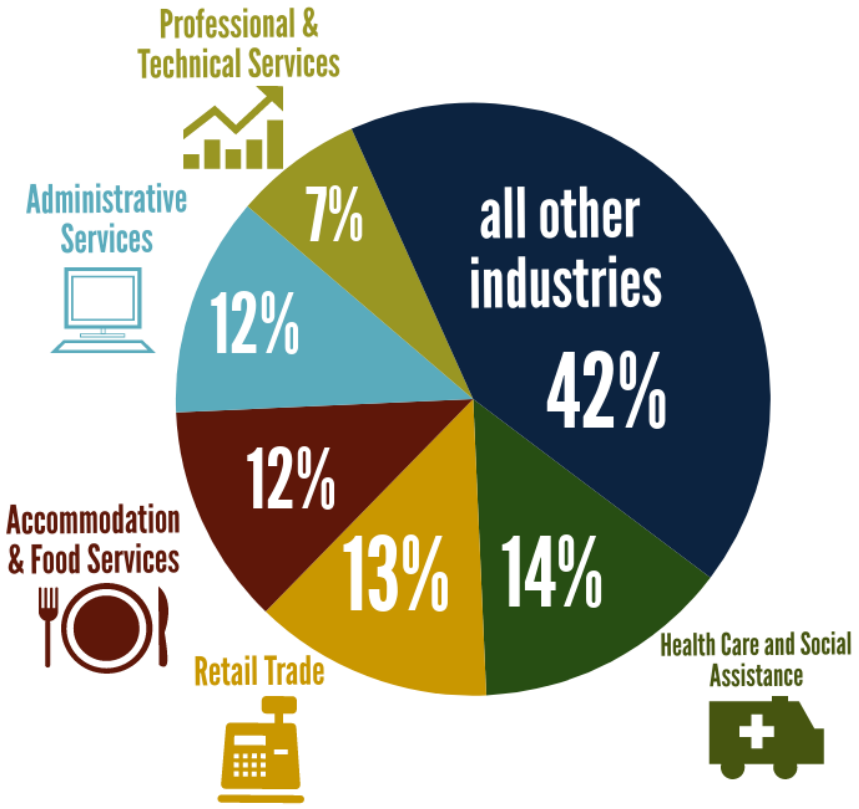
Economic Impact	ND + SB	St. Joseph County	Three County Region	Indiana
Direct Output ($M)	$48	$58	$63	$67
Indirect and Induced Output ($M)	$13	$25	$28	$33
Total Output ($M)	**$62**	**$83**	**$92**	**$101**
Employment	**400**	**600**	**700**	**800**
Earnings ($M)	**$12**	**$17**	**$18**	**$20**

Source: Notre Dame (2017), NCES (2017), Econsult Solutions (2018)

6.5 INDUSTRY DISTRIBUTION OF ECONOMIC IMPACT FROM STUDENT AND VISITOR SPENDING

The spending by students and visitors directly impacts a number of industries, and in turn creates a multiplier effect that reaches additional industries. This influx of spending into Indiana supports jobs in a wide range of sectors statewide, including health care and social assistance, retail trade, and accommodation and food services, which together represent 39 percent of the employment impact (see Figure 6.1).

FIGURE 6.1 – INDUSTRY DISTRIBUTION OF EMPLOYMENT IMPACT OF NOTRE DAME STUDENT AND VISITOR SPENDING WITHIN INDIANA



Source: Notre Dame (2017), IMPLAN (2015), Econsult Solutions (2018), Piktochart (2018)

6.6 TAX REVENUE IMPACT FROM STUDENT AND VISITOR SPENDING

Student and visitor spending also boosts various local and state tax bases, creating tax revenues for various government jurisdictions each year. It is estimated that the economic impact that results from Notre Dame student and visitor spending produces about $2.1 million in tax revenues for the State of Indiana government each year (see Table 6.6), as well as other, smaller amounts

to various local jurisdictions. In addition, visitors to Notre Dame students who stay in local hotels contribute to St. Joseph County through the hotel and motel tax. Overnight visitors are estimated to raise $160,000 in hotel and motel tax for St. Joseph County each year. Importantly, the vast majority of this tax revenue generation is from spending that originally came from outside the region. That means Notre Dame is responsible for bringing dollars into the area to produce tax revenue to support local public services.

TABLE 6.6 – ESTIMATED ANNUAL TAX REVENUE IMPACT FROM THE UNIVERSITY OF NOTRE DAME STUDENT AND VISITOR SPENDING TO SOUTH BEND AND THE STATE OF INDIANA ($M)

Tax Type	South Bend	State of Indiana
Income Tax	$0.0	$0.5
Sales Tax	-	$1.4
Business Tax	-	$0.2
Total Tax Revenue	**$0.0**	**$2.1**

Source: Notre Dame (2017), Econsult Solutions (2018), IMPLAN (2015)

"When decisions are made at the high level at Notre Dame, they impact even a little business person like me. I so appreciate the collaborative effort that Notre Dame has made to make sure their guests are spending their money and their time in Downtown South Bend."

—Peg Dalton, Peggs Restaurant

6.7 RETIREE SPENDING

To this point, this section has accounted for and quantified the positive economic effects of student spending in the region. However, Notre Dame, like many other higher education campuses in the country, also attracts retirees due to the diverse cultural and educational opportunities supported by the University.

In general, retirees make substantial contributions to local and regional communities, and are generally net positives in terms of fiscal impacts. Retirees own homes, contribute to the tax base, and generate a steady flow of dollars to the area through retirement income; this in turn supports jobs at businesses throughout the region through their spending on goods and services. Meanwhile, they are often low burdens on local cities, most notably in that most do not have school age children that need to be educated in local public schools. Due to lack of data, this report does not endeavor to quantify the number of retirees in the region or the aggregate amount

of spending represented by retirees, so it is not included in the aggregate number. However, it is important to talk about what retiree spending means for the region.

In the three county region, the population aged 55 or older increased by around 12 percent from 2010 to 2016. As this age group has grown the baby boomer generation retires, there is an increasing need for more diverse, active, intellectually stimulating and intergenerational retirement environments. Retirement communities located close to universities are particularly popular because they not only provide basic health care services as the other senior living communities, but also immerse the residents in the college community. Many retirement communities provide opportunities for residents to enroll in or audit college classes, and give residents access to campus libraries, fitness centers, and athletic events. It is estimated that at least 10 percent of the residents in university-based retirement communities are alumni, former faculty, or former employees of the University. Besides the lifelong learning benefits from the community, alumni are attracted to the area because they are interested in having a connection to their alma mater.

TABLE 6.7 – TOTAL POPULATION AGED OVER 55

	2010	2016	2010-2016 Percent Growth
St. Joseph County	67,702	75,072	10.9%
Elkhart County	46,171	52,430	13.6%
Marshall County	12,719	14,212	11.7%
Three County Region	**126,592**	**141,714**	**11.9%**
Indiana	**1,814,174**	**2,090,827**	**15.2%**
US	**86,602,632**	**102,517,586**	**18.4%**

Source: US Census Bureau (2017)

Notre Dame's Holy Cross Village is one of the best-known university-based communities in the US. It is located just 1,000 feet west of Notre Dame campus, and is close to Saint Mary's College and Holy Cross College as well. Its residents enjoy the unique campus environment as well as access to the college library, fitness center, athletic events, and audited classes at Holy Cross College and Saint Mary's College. Residents also have opportunities to participate in a quarterly lecture series, help with international student programs, and have other close ties to campus life. Holy Cross Village gained recognition by *US News & World Report* as one of the Best Nursing Homes in 2016, and earned five stars in overall performance from the federal Centers for Medicare and Medicaid services.

There are several 55+ communities around Notre Dame that benefit from their proximity to the University. One example is Stonebridge Villas at Edison Lakes located in Mishawaka. It is an active lifestyle community with 96 single-family and attached residences. The community promotes its proximity of just a five-minute drive from Notre Dame, where residents can attend a football game.



"Holy Cross Village's unique location and campus-like setting truly sets us apart from any other independent senior living communities in the area. Our close proximity to 3 prestigious institutions of higher learning (Notre Dame, Saint Mary's College, and Holy Cross College) allows residents to benefit from continued learning opportunities and the engaging experiences they share with others. At Holy Cross Village, seniors are empowered to live a full, enriching life — and thrive in a true 'community' environment."

— Holy Cross Village

These retirement communities around Notre Dame provide residency options for alumni who would like to stay close to the University, and helps to keep alumni population in the region. Retirees are net fiscal good for localities because they continue to pay taxes and support the local economy, but do not directly use many locally provided public goods such as elementary and secondary schools, and child daycare services. In addition, retirees' income is less sensitive to business cycle effects, so their support of the local economy tends to be relatively more robust during periods of high unemployment. Hence, **another way Notre Dame contributes to the regional economy is by drawing in retirees who are attracted to a campus-proximate residential location, and whose economic situation is such that they are largely net positive for localities.**

6.8 WHY IMPACT FROM STUDENT AND VISITOR SPENDING MATTERS

By attracting students and visitors to South Bend from outside of the region, Notre Dame has a significant impact on the regional economy. Notre Dame is a valuable economic development asset for South Bend in that local spending from its students and visitors supports jobs and small businesses surrounding its campus.

It is important to note that many of the key spending sectors represented by students and visitors contain low-margin businesses for whom the difference between survival and obsolescence is very narrow. Thus, the infusion of spending power from students and visitors can be particularly impactful in these categories and in locations near campus.

The impact that these students and visitors have on the surrounding neighborhood goes beyond the economic value of their spending. **Students, particularly those living off-campus, drive the demand for a diverse mix of higher quality retail and restaurants. This, in turn, leads to commercial growth in the neighborhood, which benefits students and local residents alike.**

Furthermore, it grows those local property tax bases and thus provides funds for essential public services and public education.

By drawing students and their visitors from around the world, Notre Dame brings their spending into the region, where it can support a diverse mix of commercial activity and grow the local tax base. The next section explores another type of visitor Notre Dame draws into the area, which are attendees and participants of the many athletic, cultural, and educational events hosted on campus.

7.0 IMPACT FROM EVENT PARTICIPANT SPENDING

7.1 SECTION OVERVIEW



The previous section described the economic impact of ancillary spending from students, their visitors, and local retirees. This section details the additional economic impact produced in the region by individuals visiting the University of Notre Dame for athletic, alumni, educational, and cultural events. In this way, Notre Dame is more than an educational institution, but a true driver of the regional economy. **In aggregate, the economic impact of ancillary spending of these individuals in Indiana is estimated to be over $290 million in total output, supporting nearly 2,700 jobs, and generating over $6.1 million in tax revenues annually.** The economic input of this spending is also reflected in the sector volume and diversity of residents supported by this spending, which is a significant quality of life benefit to year-round residents.

7.2 THE ECONOMIC RAMIFICATIONS OF THE UNIVERSITY AS HOST TO LARGE-SCALE EVENTS

Large-scale public events such as football and hockey games, as well as conferences and concerts, have a variety of economic implications for the South Bend-Elkhart region's residents and businesses. Oftentimes, major events in collegiate communities can have negative connotations because of the implied strain that they place on the host municipality's resources. However, as discussed in Section 3, Notre Dame's police, fire and emergency response departments are 24-hour resources that cover all on campus policing and public safety needs. Additional resources that the University requires to ensure public safety coverage across the region are coordinated collaboratively with local law enforcement agencies and public officials.

While Notre Dame absorbs most of the costs of these large-scale events, the economic benefits are felt throughout the region in a number of ways:

- driving activity at the South Bend International Airport, which continues to grow in size and volume of daily direct flights;
- expanding additional part-time employment opportunities through the security and concessionary needs of events;

- offering local residents opportunities for additional income through home-sharing options on major event weekends;
- and also simply bolstering the growing community of small businesses and restaurants by giving them infusions of increased activity at various times throughout the year.

7.3 NOTRE DAME ATHLETICS EVENTS AND THEIR VISITORS' SPENDING

Many spectators come from out of the region to attend games, in particular for the football program, which carries a national following and accounts for the majority of total athletic event attendance (See Table 7.1). In addition to spectators, each team competing against Notre Dame brings with them their own fans, coaches, and media.

TABLE 7.1– NUMBER OF SPECTATORS BY TYPE OF SPORT AND BY VISITOR TYPE, 2016-2017 SEASON

Sport	Number of Events	Number of Spectators	Students and Faculty	Local	Regional (Day Trip)	Overnight Trip
Men's Soccer	12	15,610	7,805	2,342	3,903	1,561
Women's Soccer	13	12,330	6,165	1,850	3,083	1,233
Volleyball	16	11,860	5,930	1,779	2,965	1,186
Football	7	657,758	106,464	109,555	136,063	305,675
Men's Basketball	20	162,390	81,195	24,359	40,598	16,239
Women's Basketball	16	130,400	65,200	19,560	32,600	13,040
Hockey	24	67,190	33,595	10,079	16,798	6,719
Baseball	27	9,700	4,850	1,455	2,425	970
Softball	21	4,720	2,360	708	1,180	472
Men's Lacrosse	8	19,050	9,525	2,858	4,763	1,905
Women's Lacrosse	10	10,610	5,305	1,592	2,653	1,061
Total	**174**	**1,101,618**	**328,394**	**176,134**	**247,028**	**350,061**

Source: Notre Dame (2017), NCES (2017), Econsult Solutions (2018)

Data provided by Notre Dame indicates total attendance at athletic events for academic year 2016-2017 of approximately 1.1 million. The largest segment came from football home games, which had a total attendance of around 657,758, including an estimated 305,000 overnight visitors. Men's Basketball, which plays around 20 on campus home games per year, has an aggregate attendance of around 162,390 annually; women's basketball, which recently celebrated a National Collegiate Athletic Association championship, is responsible for nearly as many spectators and out-of-town guests. Notre Dame also has more than twenty other teams, which together draw a collective attendance of nearly 187,480 annually. Attendees for football are estimated to be comprised of 33 percent students and locals, while attendees for other sports are estimated at 65 percent locals and students.



Spending profiles for athletics event visitors are divided into regional and overnight. Local and students visitors are conservatively assumed not to contribute any net new spending. It is important to note that a unique visitor spending profile was created for football weekends based on the heightened demand for lodging during this time (see Appendix B for more detail).

Aggregate ancillary spending by non-football athletic event spectators yields approximately $10 million in spending within Notre Dame and South Bend, $11 million within St. Joseph County, about $12 million within the region, and $13 million within Indiana. However, an adjustment needs to be made to account for the fact that some of that spending immediately leaves the region and therefore does not have a multiplier effect within the regional economy. For example, a large proportion of retail spending goes to manufacturers and wholesalers, most of which are outside the region. The modeling approach used in this report conservatively includes only the retail margin (i.e. the difference between the purchase price for the retailer and the sales price for the customer). Based on this adjustment, the amount of spending included in our analysis is $8.2 million within the Notre Dame and South Bend, $8.9 million within St. Joseph County, $9.6 million within the region, and $10.2 million within the Indiana (see Table 7.2).

TABLE 7.2– AGGREGATE ANCILLARY SPENDING BY NON-FOOTBALL ATHLETIC EVENT SPECTATORS BY GEOGRAPHY ($M)

Type	ND + SB	St. Joseph County	Three County Region	Indiana
Regional Visitors	$4.8	$5.2	$5.6	$6.0
Overnight Visitors	$5.5	$5.9	$6.3	$6.7
Total	**$10.3**	**$11.1**	**$11.9**	**$12.7**
Minus Non-Modeled Amount	$2.1	$2.2	$2.4	$2.4
Modeled Amount	**$8.2**	**$8.9**	**$9.6**	**$10.3**

Source: Econsult Solutions (2018)

Football game spectators yield approximately $84 million in spending within Notre Dame and South Bend, $102 million within St. Joseph County, about $133 million within the region, and $146 million within Indiana. The adjusted amount of spending included in our analysis is $74 million within Notre Dame and South Bend, $91 million within St. Joseph County, $121 million within the region, and $134 million within Indiana, based on the same adjustment applied to the overall athletic spending model (see Table 7.3).

TABLE 7.3 –AGGREGATE ANCILLARY SPENDING BY FOOTBALL GAME SPECTATORS BY GEOGRAPHY ($M)

Type	ND + SB	St. Joseph County	Three County Region	Indiana
Regional	$5.0	$5.4	$5.8	$6.2
Overnight	$79.2	$96.3	$126.8	$139.6
Total	**$84.2**	**$101.8**	**$132.7**	**$145.8**
Minus Non-Modeled Amount	$10.0	$10.7	$11.4	$12.0
Modeled Amount	**$74.2**	**$91.1**	**$121.3**	**$133.8**

Source: Econsult Solutions (2018)

THE UNIQUE IMPACT OF NOTRE DAME FOOTBALL

Notre Dame Football draws fans from around the country into the region. For a few weekends a year, the area sees an influx of spectators excited to watch the Fighting Irish at Notre Dame Stadium. While local hotels benefit greatly from the increased demand, for their hospitality, local homeowners — in both South Bend and the surrounding areas — also benefit from these events. For many local homeowners, football game weekends translate to additional income from renting out their homes through various home-sharing websites such as Airbnb, HomeAway, VRBO, Gameday Housing and Rent Like A Champion. In fact, a study by *NerdWallet* ranked South Bend as the third hottest town for home rentals in the country during home football games. Rent Like A Champion, a web-based home sharing service specifically designed for college events, was founded by three students during their time at Notre Dame when it became evident to them that there was a high demand for housing on these weekends.[22]



South Bend International Airport also sees a surge in activity during game weekends. To accommodate fans traveling to South Bend from New York City, Delta Airlines adds a Friday afternoon flight to South Bend International only for home football weekends.[23] There is also an uptick in private jets using the airport, with local fixed-base operators handling over 200 aircraft for the biggest games.

This boon of activity is not limited to

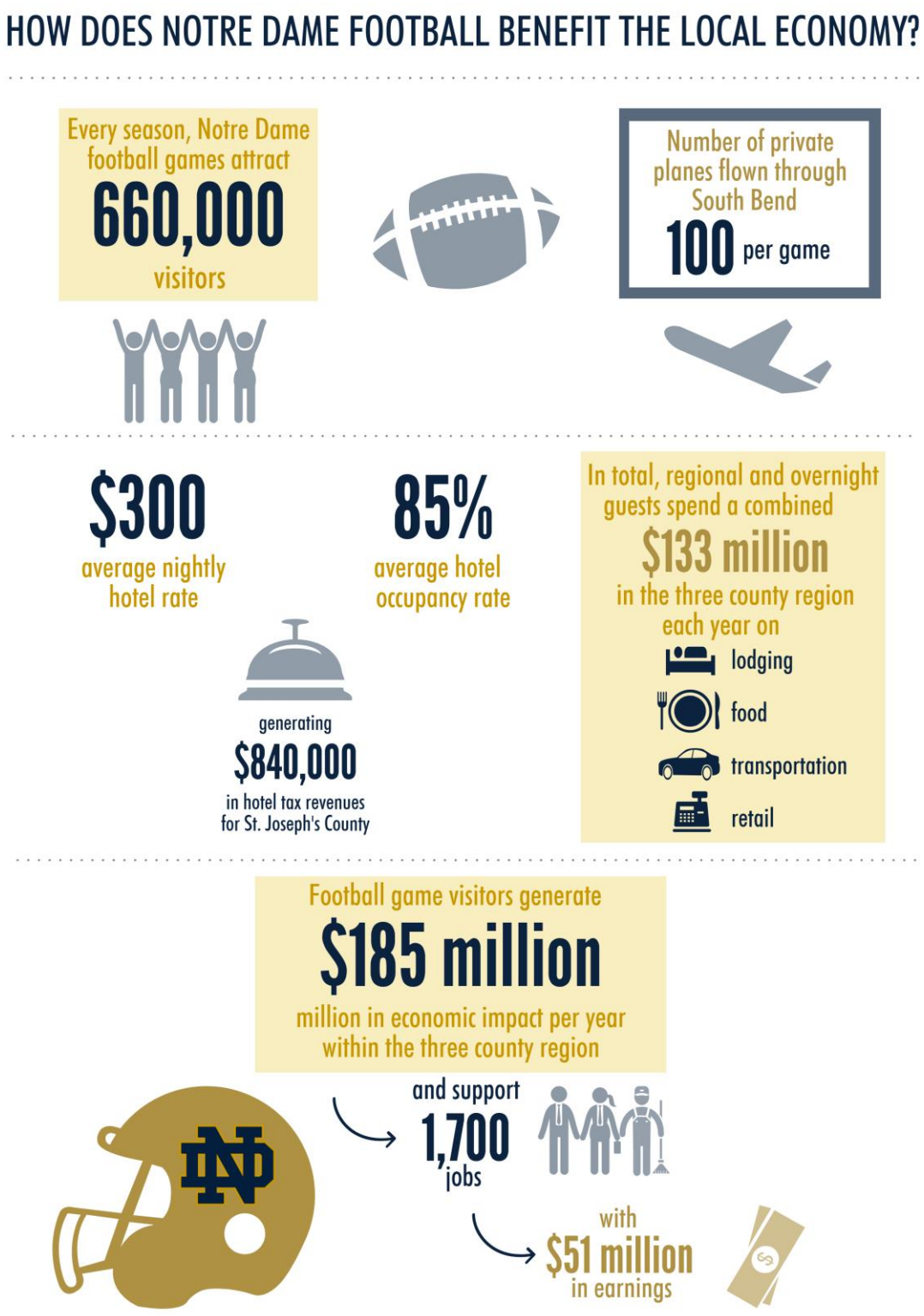
[22] Jeff Parrott, "Indiana City Is One of the Hottest Short-Term Rental Markets in the US." *Skift, 29 Oct 2017,* Accessed 27 Mar 2018
[23] Caleb Bauer, "South Bend air traffic surges for Notre Dame-USC game." *South Bend Tribune*, 21 Oct 2017, Accessed 15 Feb 2018

residents living and working in South Bend. Randy Jones, the president of fixed-base operator Corporate Wings at the South Bend International Airport explains that on the busiest game weekends, the flurry of activity from the Fighting Irish is far-reaching, "All of the rental car agencies tell us that they're completely sold out for the (University of Georgia) weekend. And, I know some people are booking hotel rooms in Goshen and Elkhart." This activity, while only a few weekends a year, adds up to a significant amount of spending in the region. In fact, the combined ancillary spending by Notre Dame Football fans yields roughly $84 million in spending within Notre Dame and South Bend, nearly $102 million within St. Joseph County, about $133 million within the region, and approximately $146 million within Indiana (See Figure 7.1).

"During the University of Georgia game weekend, we sold as much fuel as we did the entire month of August."

— Randy Jones, President of Corporate Wings

FIGURE 7.1-THE EFFECT OF NOTRE DAME FOOTBALL ON THE REGION



7.4 OTHER LARGE SCALE EVENTS AND THEIR VISITORS' SPENDING

While a large proportion of ancillary spending comes from athletic events, Notre Dame regularly serves as a host to many visitors for various educational, cultural, and alumni events. In addition, many Notre Dame alumni come back to campus go to mass at the Basilica, take a picture with The World Life Mural, or even marry their college sweetheart. Many of these visitors come from outside of the region, spending money at local hotels and restaurants, which helps support employment and generate tax revenues for the City and the State. Indeed, **Notre Dame is one of the region's biggest local draws and generates visitation to other regional attractions.**



To accurately estimate aggregate visitor spending, it is necessary to develop spending profiles of the various types of visitors, recognizing that not all visitors have the same economic footprint. Based on reason for visit, duration of trip, distance traveled, event type, and visitor age, unique spending pattern behaviors were created. This visitor spending analysis accounts for the following visitor types:

- **Alumni Events** include events such as Alumni Board Meetings, Family Volunteer Camps, Alumni Sports Weekends, Alumni Reunions, and Alumni Leadership Conferences.
- **Arts and Culture** include events such as those at Notre Dame's Center for Arts and Culture, various performers, and the World Pulse Festival.
- **Non-Local Hosted Athletic Events** include the America's Youth on Parade (AYOP) national baton-twirling competition, various hockey tournaments, and Notre Dame's Golden Dome Volleyball invitational.
- **Local Hosted Athletic Events** include events such as the Harlem Globetrotters, the Logan Run/Walk and the Sunburst Race.
- **Sports Camps** include Notre Dame sponsored sports camps for high school students.
- **Weddings** include couples and their guests spending their wedding weekends in Notre Dame.
- **Conferences** include visitors to campus for various professional and cultural conferences.
- **Eck Visitors Center** includes visitors that come to campus for a tour of its historic sites.
- **Religious Pilgrims and Churchgoers** include visitors to the Basilica and other on-campus religious sites.

In total, there were approximately 675,300 visitors to Notre Dame's campus for various, professional, cultural, celebratory, and religious events (see Table 7.3), demonstrating how beyond its draw of students and their visitors and of attendees and participants of athletic events, Notre Dame attracts a wide range of additional visitors to its campus and events. .

TABLE 7.4–ATTENDEES BY TYPE OF EVENT, 2016-2017

Event Type	Total Attendees	Students, Faculty, Local	Regional (Day Trip)	Overnight Trip	Average Number of Nights
Alumni	5,700	570	1,140	3,990	2
Arts	79,000	59,250	11,850	7,900	1
Non-Local Hosted Athletic Events	31,900	0	7,975	23,925	1
Local Hosted Athletic Events	15,300	11,475	3,060	765	1
Sports Camps	23,000	2,300	3,450	17,250	1
Weddings	13,600	3,400	3,400	6,800	2
Conferences	94,500	18,900	18,900	56,700	2
Eck Visitors Center	144,100	43,230	72,050	28,820	1
Masses	250,000	87,500	100,000	62,500	1
Warren Golf Course	18,200	4,550	6,370	7,280	1
Total	**675,300**	**231,175**	**228,195**	**215,930**	

Source: Notre Dame (2017), Econsult Solutions (2018)

Spending by outside visitors similarly leads to the economic vitality of the region. Aggregate ancillary spending by visitors generates about $37 million in spending within Notre Dame and South Bend, $40 million within St. Joseph County, about $42 million within the region, and approximately $45 million within Indiana. However, an adjustment needs to be made to account for the fact that some of that spending immediately leaves the region and therefore does not have a multiplier effect within the regional economy. For example, a large proportion of retail spending goes to manufacturers and wholesalers, most of which are outside the region. The modeling approach used in this report conservatively includes only the retail margin (i.e. the difference between the purchase price for the retailer and the sales price for the customer).

Drawing Visitors through Scholarship

Changing Histories of the State is a three-day conference that was hosted at Notre Dame and connected scholars from the US and Europe, who specialize in history between the 17th to 19th centuries, in a comparative conversation on 'the state of 'he State' in their respective historiographies. The conference invited speakers and participants from institutions such as the University of Edinburgh, University of Oxford, University of Stanford, and University of Pennsylvania.

Based on this adjustment, the amount of spending included in our analysis is $30 million within the Notre Dame and South Bend, $33 million within St. Joseph County, $35 million within the region, and $37 million within Indiana (see Table 7.5).

TABLE 7.5– AGGREGATE ANCILLARY SPENDING BY NON-ATHLETIC EVENT VISITORS BY GEOGRAPHY ($M)

Type	ND + SB	St. Joseph County	Three County Region	Indiana
Regional Visitors	$9.9	$10.7	$11.5	$12.3
Overnight Visitors	$26.7	$28.8	$30.8	$32.8
Total	**$36.7**	**$39.5**	**$42.3**	**$45.1**
Minus Non-Modeled Amount	$6.6	$7.0	$7.4	$7.8
Modeled Amount	**$30.1**	**$32.5**	**$34.9**	**$37.3**

Source: Econsult Solutions (2018)

7.5 ECONOMIC IMPACT FROM LARGE-SCALE EVENT PARTICIPANT SPENDING

Spending by visitors to Notre Dame's athletics and other large-scale events represents a significant component of the South Bend-Elkhart regional economy. And, while Notre Dame Football is one part of that story, visitors are increasingly coming to the region to visit South Bend and Notre Dame's campus for a variety of reasons: other sports events, conferences, cultural events, and simply leisure tourism. Aggregate ancillary spending by all Notre Dame event visitors generates about $132 million in spending within Notre Dame and South Bend, $153 million within St. Joseph County, about $187 million within the region, and approximately $204 million within Indiana.

TABLE 7.6– AGGREGATE ANCILLARY SPENDING BY NOTRE DAME EVENT VISITORS BY GEOGRAPHY ($M)

Type	ND + SB	St. Joseph County	Three County Region	Indiana
Athletic Event Visitors (Non-Football)	$10.3	$11.1	$11.9	$12.7
Football Game Visitors	$84.2	$101.8	$132.7	$145.8
Non-Athletic Event Visitors	$36.7	$39.5	$42.3	$45.1
Total	**$131.2**	**$152.4**	**$186.9**	**$203.6**
Total Modeled	**$112.5**	**$132.5**	**$165.8**	**$181.5**

Source: Econsult Solutions (2018)

Once a visitor has completed their time on campus, they frequently spend additionally on food, lodging or retail items in the businesses in the region, thus generating additional economic activity. Ultimately, this influx of ancillary spending by visitors to Notre Dame has a multiplier effect throughout the region, generating the following annual economic impacts (see Table 7.7):

- $153 million in total output, supporting 1,500 jobs and $43 million in earnings within Notre Dame and South Bend;
- $207 million in total output, supporting 2,000 jobs and $60 million in earnings within St. Joseph County;
- $256 million in total output, supporting 2,500 jobs and $71 million in earnings within the region;
- $292 million in total output, supporting 2,700 jobs and $79 million in earnings within the Indiana.

TABLE 7.7– ESTIMATED ANNUAL ECONOMIC IMPACT FROM NOTRE DAME EVENT VISITORS SPENDING WITHIN NOTRE DAME AND SOUTH BEND, ST. JOSEPH COUNTY, THE REGION, AND INDIANA

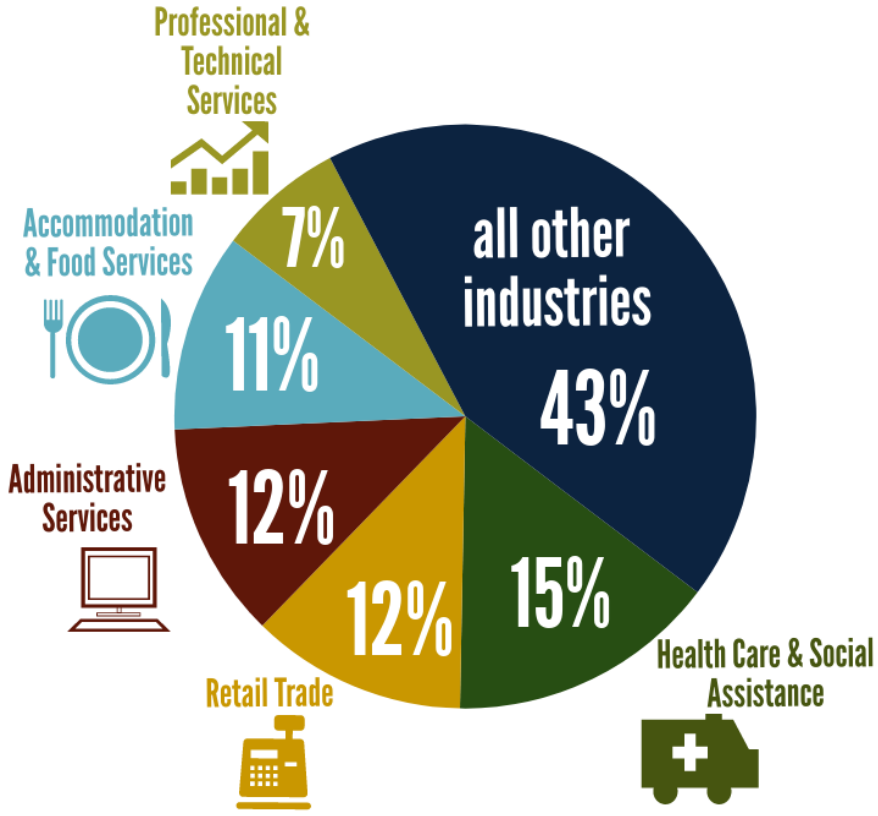
Economic Impact	ND + SB	St. Joseph County	Three County Region	Indiana
Direct Output ($M)	$113	$133	$166	$182
Indirect and Induced Output ($M)	$40	$74	$90	$110
Total Output ($M)	**$153**	**$207**	**$256**	**$292**
Employment	**1,500**	**2,000**	**2,500**	**2,700**
Earnings ($M)	**$43**	**$60**	**$71**	**$79**

Source: Notre Dame (2017), NCES (2017), Econsult Solutions (2018)

7.6 INDUSTRY DISTRIBUTION OF ECONOMIC IMPACT FROM EVENT PARTICIPANT/VISITOR SPENDING

The spending by visitors to athletic and other large-scale events directly impacts a number of industries, and in turn creates a multiplier effect that reaches additional industries. This influx of spending into Indiana supports jobs in a wide range of sectors statewide, including health care and social assistance, retail trade, and administrative services, which together represent 39 percent of the employment impact (see Figure 7.2).

FIGURE 7.2 – INDUSTRY DISTRIBUTION OF EMPLOYMENT IMPACT OF NOTRE DAME'S EVENT SPENDING WITHIN INDIANA



Source: Notre Dame (2017), IMPLAN (2015), Econsult Solutions (2018), Piktochart (2018)

7.7 TAX REVENUE IMPACT FROM EVENT PARTICIPANT/VISITOR SPENDING

Event spending also boosts various local and state tax bases, creating tax revenues for various government jurisdictions each year. It is estimated that the economic impact that results from event participant spending produces about $6.1 million in tax revenues for the State of Indiana government each year (see Table 7.8), as well as other, smaller amounts to various local jurisdictions. Overnight event participants and visitors generate significant revenue for St. Joseph County as well through the county hotel and motel tax. These visitors contribute an estimated $0.8 million in hotel and motel tax revenue to the county annually.

Importantly, the vast majority of this tax revenue generation is from spending by out-of-town visitors. Tourism is an important economic development driver because it draws outside money in to support local tax bases; and Notre Dame is a key part of the region's tourism industry.

TABLE 7.8 – ESTIMATED ANNUAL TAX REVENUE IMPACT FROM THE UNIVERSITY OF NOTRE DAME EVENT PARTICIPANT SPENDING TO SOUTH BEND AND THE STATE OF INDIANA ($M)

Tax Type	South Bend	St. Joseph County	State of Indiana
Income Tax	$0.2	-	$2.1
Sales Tax	-	-	$3.6
Business Tax	-	-	$0.4
Hotel Tax	-	$0.8	-
Total Tax Revenue	**$0.2**	**$0.8**	**$6.1**

Source: Notre Dame (2017), Econsult Solutions (2018), IMPLAN (2015)

7.8 WHY IMPACT FROM EVENT PARTICIPANT/SPECTATOR SPENDING MATTERS

While this section quantified the economic impacts of these events, it is also important to realize the important non-economic benefits that these events have on local residents. Many residents can benefit from renting their home out for a football game or realizing a higher margin at their local businesses. These events also add to the diversity and uniqueness of the region increasing the quality of life for residents and students alike.



Notre Dame, as a destination and as a host of many types of large-scale events, is one of the region's largest tourist draws. **By attracting visitors for athletic, educational, cultural, alumni, and celebratory events to Notre Dame from outside of the region, Notre Dame has a significant impact on the regional economy by bringing in millions in visitor spending, which supports a wide range of merchants throughout the region.** This infrastructure of transportation, retail/restaurant, and entertainment options enables the region to aggressively promote itself to a number of audiences. For example, the sheer volume of hotel rooms needed to support game days then gives the region the ability to draw in larger conferences and group events than might otherwise be possible.

It is understood that large-scale visitor draws generate new revenue opportunities but also new expenditure burdens. This section has been focused on the economic impact produced by visitors drawn to the region by Notre Dame. It is important to note, as discussed in Section 3.4, that the additional expenditure burden created by these large-scale events is often largely if not totally

mitigated by Notre Dame's own provision of key services normally rendered by localities, such as police and fire. Hence, from the region's standpoint, it is enjoying the benefits of significant visitation produced by Notre Dame, while any attendant costs are shared largely if not totally by Notre Dame.

8.0 IMPACT FROM CAPITAL INVESTMENTS

8.1 SECTION OVERVIEW

In addition to its annual operations, the University of Notre Dame expends significant resources on a wide range of capital investments. These investments refresh, expand, and enhance the physical space in which Notre Dame's operations take place, and as such are an integral part of Notre Dame's present and potential success. These investments also allow the University to improve the environmental sustainability of its built environment and provide additional opportunities to connect its mission and work with the South Bend Elkhart region.

These capital outlays also produce economic impact for the region, for they represent economic opportunities for the construction industry and related sectors. This section finds that on average the annual statewide impact from capital investments by Notre Dame is $478 million, supporting 3,100 jobs and generating $10.1 million in state tax revenues. This is the last of the economic impact categories that together sum to Notre Dame's aggregate annual impact. The aggregate impact comes from the University's own spending on operations (Section 2), the wage premium earned by Notre Dame alumni who stay local (Section 5), spending by students and their visitors (Section 6), spending by event attendees and participants (Section 7), and the University's own spending on capital investments (Section 8). It is also, in a sense, the thing that enables all other impacts, for all of those impacts are made possible by the work of Notre Dame in a particular place, which is its campus. The capital investments the University undertakes represent its stewardship of that campus.



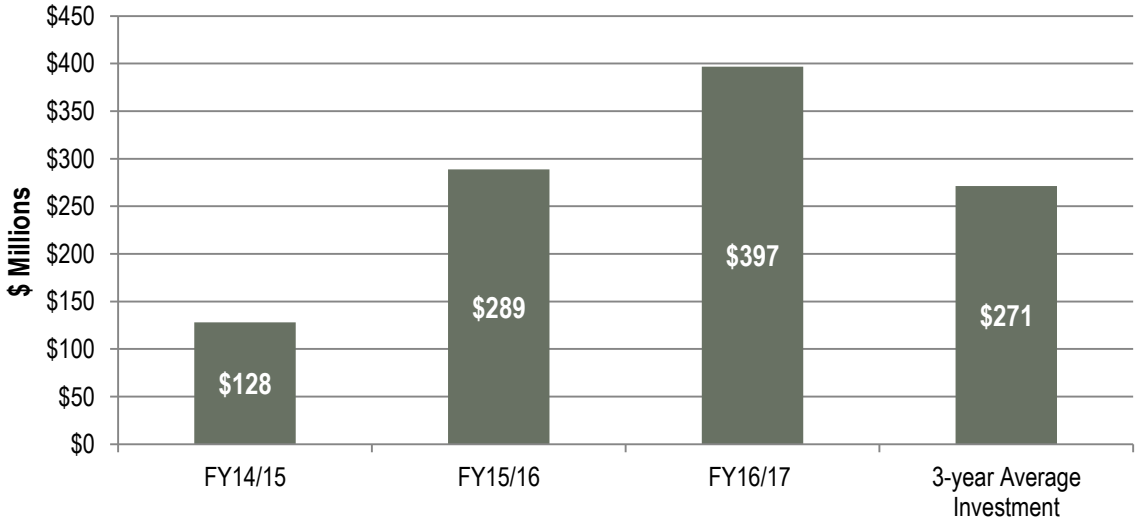
"The three projects Notre Dame is investing in—the Eddy Street Commons, Northeast Neighborhood Revitalization Project and Innovation Park—attempt to better the community, which in turn will benefit the University. And all three are important projects for us, because they will tighten the link between the University and the community."

—John Affleck-Graves, Executive Vice President

8.2 PROJECTS AND SPENDING

Notre Dame's values-driven mission of Catholic scholarship, research, and service can be seen throughout campus, and can be recognized in its strategic capital investments. For example, all new construction projects are completed using sustainable building guidelines, which align with the University's recognition that environmental stewardship is an essentially Catholic value. And, as this section will demonstrate, these projects were developed keeping in mind Notre Dame's central mission of education as well as consideration for making these investments accessible to the community. Starting in 2015, Notre Dame embarked on a major capital investment campaign, which has included new construction, major renovations, and large-scale maintenance. To account for variations in capital spending from year to year, spending has been annualized to get a better idea of the impact that Notre Dame's capital projects have on South Bend, St. Joseph County, the region, and the state each year. Over the past three years, FY2015 to FY2017, Notre Dame's capital expenditures totaled more than $800 million, averaging about $271 million per year (See Figure 8.1).

FIGURE 8.1 – NOTRE DAME'S CAPITAL EXPENSES FY 2015– FY2017



Source: Notre Dame (2018)

In addition to supporting the advancement of Notre Dame's mission, these investments also represent economic activity within South Bend, yielding commercial opportunities for the local construction sector and producing a spillover impact across a number of support industries. In addition to increased tax revenue induced by the economic activity Notre Dame generates, the University also contributes to City revenues in the form of permits and fees from whenever it undertakes a major construction project.

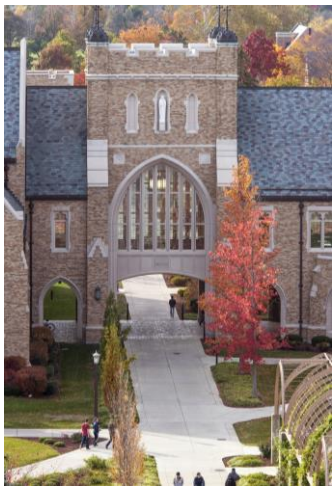
CAMPUS CROSSROADS



Campus Crossroads is the largest capital investment project in the University's history, with more than 800,000 square feet of classroom, research, student life, and event and hospitality space across three new buildings that surround the recently renovated Notre Dame Stadium. While these enhancements immediately impact the students, faculty and staff that use campus facilities every day, this project also serves the South Bend-Elkhart region by expanding the available event and conference spaces open to visitors to the region as well as serving as a potential meeting and event space for local residents. In total, the project budget was $400 million (with an additional $70 million of other stadium improvements that will allow the stadium and its newly connected buildings to be used every day for a variety of uses.

The Intersection of Academic, Athletics, and Student Life

Features of the Campus Crossroads project include the Duncan Student Center, which has created a central meeting place for Notre Dame students as well as more dining options, a recreational sports facility and a new career service center. Importantly, the project also includes construction of O'Neill Hall and the Corbett Family Hall, which provides more space for growing academic programs and creates more opportunities for interdisciplinary interaction and scholarly advancement.



MCCOURTNEY HALL

In 2016, Notre Dame completed construction on McCourtney Hall of Molecular Science and Engineering. The 220,000 square foot center houses researchers from the Colleges of Engineering and Science, allowing them to work collaboratively to solve problems. The research hub includes 100,000 square feet of open lab space, additional flex space, collaborative faculty offices, and conference rooms.

EXPANSION OF RESIDENTIAL FACILITIES

In the fall of 2016, Notre Dame opened two new residence halls, Dunne Hall (for men) and Flaherty Hall (for women). Both halls were funded by two $20 million gifts provided by Jimmy and Susan Dunne and Jay and Mary Flaherty. The opening of Dunne and Flaherty Halls has allowed Notre Dame to address an overcrowding problem in older residential communities. Also serving the Notre Dame's student body is the North Dining Hall, originally built in 1957 and previously renovated in 1988, reopened in the fall of 2017 after two years of extensive renovations.



These enhancements and expansions represent an investment in the quality of campus life that Notre Dame desires for its students. Recently, additional on-campus residential requirements were announced, with the goal being for students to experience a closer sense of community and engagement during their time on campus. This speaks to Notre Dame's desire not only to educate its students in the classroom but also to build character and community through their residential living experiences.

INVESTMENT IN THE NORTHEAST NEIGHBORHOOD

The University of Notre Dame has taken a leading role in the revitalization of the Northeast Neighborhood (NEN) of South Bend, a blighted, predominantly residential area located immediately south of Notre Dame's campus: Investments in the NEN include the following:

- **Eddy Street Commons:** Notre Dame joined four other local institutions (the City of South Bend, Memorial Hospital, St. Joseph Regional Medical Center, and South Bend Clinic) and neighborhood residents to form the Northeast Neighborhood Revitalization Organization (NNRO) in 2000. Working together, the NNRO created the conceptual redevelopment plan that later evolved into Eddy Street Commons (see more below).

- **The Triangle:** The NNRO sponsored the redevelopment of a severely blighted residential neighborhood known as The Triangle. The Triangle offers buildable lots for owner-occupied, single-family detached homes, with 70 percent of the lots available to market-rate buyers and 30 percent of the lots reserved for affordable housing buyers. Construction of the 52 new homes is nearly complete.

- **NDAHP:** Notre Dame has also sponsored the Notre Dame Avenue Housing Program (NDAHP), which offers full-time University employees the opportunity to construct new,

single-family detached homes on lots located close to campus, on or near Notre Dame Avenue. By 2017, 55 homes had been built or rehabilitated under the program.

This type of investment yields ongoing benefits to the community as new housing, accessible to residents from a variety of economic backgrounds, is made available to the market. It also reflects the kind of investment and engagement that Notre Dame has increasingly made under the leadership of Father Jenkins, who has worked to ensure that Notre Dame is a good neighbor to, and willing partner with, its neighbors.

THIRD PARTY CAPITAL INVESTMENT: EDDY STREET COMMONS

Eddy Street Commons is a mixed-use, new urbanist redevelopment of the area immediately south of campus featuring office, retail, hospitality, and residential uses. The two-phase project is being developed by Kite Realty Group (an Indianapolis-based REIT) on land assembled by Notre Dame that serves as the new gateway to campus. Combined, the two phases represent nearly $300 million in investment into the Northeast Neighborhood:

- Phase I of the project is nearing completion, with a new 164-room Embassy Suites hotel being added to the site. Already completed are the 119-room Fairfield Inn & Suites, 170,000 square feet of retail, restaurant, and office space, 266 apartment units, 123 condo units, and 78 townhomes. The development also includes a 1,276-vehicle, multi-level parking garage to support the increased activity in the area.

- Phase II was designed with input from the University, its NNRO partners, and neighborhood residents. The development broke ground in late 2017 and will offer 8,500 square feet of restaurant space, 17 “flex” (commercial/residential) units, 433 rental apartment units, 22 single-family for-sale homes, a grocery-anchored neighborhood retail center, and a new Robinson Community Learning Center. This final phase of Eddy Street Commons is slated for completion by mid-2020, with graduate apartments opening in 2019.



Although Eddy Street Commons is not a direct investment on the part of Notre Dame, it is part of the impact Notre Dame produces because that outlay would not have been possible but for Notre Dame’s assemblage of the underlying land and commitment to the project itself. The major outlays for Eddy Street Commons fell outside of the time period used in this section to estimate economic impact from capital investments, so they are not included in this analysis. Nevertheless, it is important to note that Notre Dame’s

impact from capital investments extends well beyond those projects it funds directly, since it is helping to catalyze additional construction projects by creating demand for campus-proximate locations.

> ***"Because of our partnership structure and collective determination, we were able to work through issues, solve problems and deliver the project you see today…Without our third partner, the city of South Bend, both phases would never have gotten off the ground. Unlike a lot of cities, South Bend has been forward-thinking in its approach and use of public/private partnerships to drive investment and growth."***
>
> ***— Matt Gabet, Kite Realty***

LOCAL INVESTMENT FOR FUTURE CAPITAL PROJECTS: RACLIN MURPHY MUSEUM OF ART

Since 2007, Notre Dame has been planning for a new art museum. Those plans have made recent progress after the University received a lead gift from Ernestine Raclin and her daughter and son-in-law Carmen and Chris Murphy in 2017. A new 70,000 square foot, $66 million art museum named the Raclin Murphy Museum of Art will be built on the south end of the Notre Dame campus facing Angela Boulevard. The Raclin Murphy Museum of Art will be the first phase of what is ultimately to become a 132,000 square foot arts complex, joining the DeBartolo Performing Arts Center, Charles B. Hayes Family Sculpture Park, Matthew and Joyce Walsh Family Hall of Architecture and O'Neill Hall of Music. Construction will begin in 2020 with an anticipated completion by early 2022. The strategic location of the Raclin Murphy Museum will make it a great anchor point for bringing the community and University together.

8.3 ECONOMIC IMPACT FROM CAPITAL INVESTMENTS

As previously noted, Notre Dame's annualized capital investment into projects within South Bend is $271 million. These projects include hard construction costs on new facilities, as well as renovation and state of good repair expenses, equipment purchases, and the purchase and procurement of materials and services. These expenditures support a wide base of wholesalers, manufacturers, and professional services providers in addition to construction companies within the city and state. In total, Notre Dame's capital expenditure activity annually generates:

- $355 million in total output, supporting 2,400 jobs and $123 million in earnings within Notre Dame and South Bend;
- $427 million in total output, supporting 2,900 jobs and $144 million in earnings within St. Joseph County;

- $453 million in total output, supporting 3,000 jobs and $150 million in earnings within the three county region;

- $478 million in total output, supporting 3,100 jobs and $155 million in earnings within Indiana (see Table 8.1).

TABLE 8.1– ANNUAL ECONOMIC IMPACT OF THE UNIVERSITY OF NOTRE DAME'S CAPITAL INVESTMENTS WITHIN NOTRE DAME AND SOUTH BEND, ST. JOSEPH COUNTY, THREE COUNTY REGION, AND INDIANA

Economic Impact	ND + SB	St. Joseph County	Three County Region	Indiana
Direct Output ($M)	$271	$271	$271	$271
Indirect and Induced Output ($M)	$84	$156	$182	$207
Total Output ($M)	**$355**	**$427**	**$453**	**$478**
Employment	**2,400**	**2,900**	**3,000**	**3,100**
Earnings ($M)	**$123**	**$144**	**$150**	**$155**

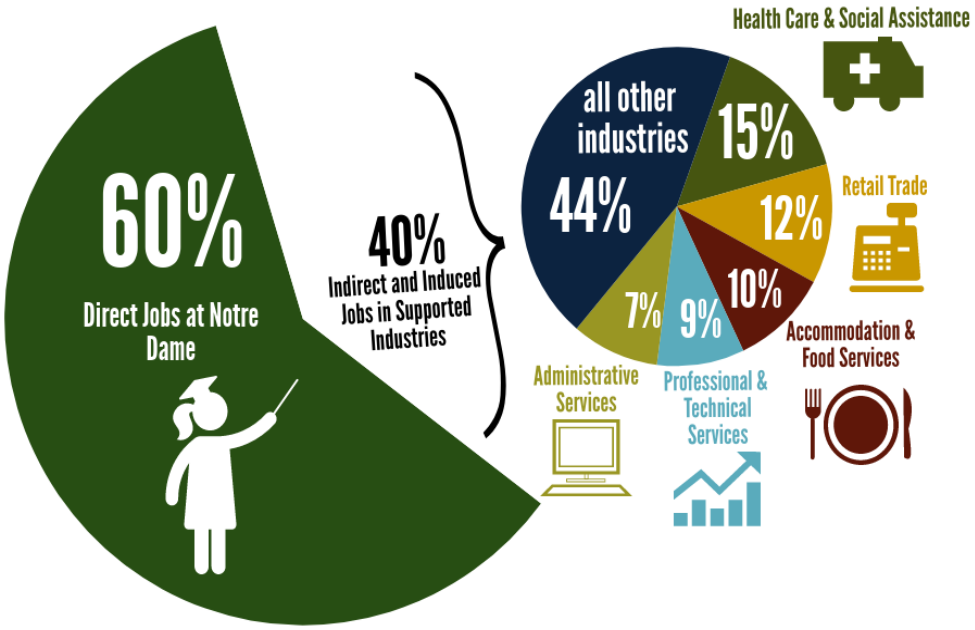
Source: Notre Dame (2018), IMPLAN (2018)

8.4 INDUSTRY DISTRIBUTION OF ECONOMIC IMPACT FROM CAPITAL INVESTMENTS

The economic impacts associated with Notre Dame's capital investments spread to industries far beyond the construction sector. While the construction industry is the largest individual beneficiary from these investments, other industries including healthcare and social assistance, retail trade, and accommodation & food services also see significant benefits from the indirect (supply chain) and induced (labor income) impacts of the capital activity.

Figure 8.2 shows the proportion of the total employment impact associated with Notre Dame's capital investments that accrues in and beyond the construction industry within the state. In Indiana, more than half of the employment supported by capital investments is in sectors outside of construction. Hence, every year Notre Dame capital projects directly employ over 800 people, but they also generate economic activity that supports an additional 1,200 jobs.

FIGURE 8.2 – INDUSTRY DISTRIBUTION OF EMPLOYMENT GENERATED BY NOTRE DAME'S CAPITAL INVESTMENT WITHIN INDIANA



Source: Notre Dame (2017), IMPLAN (2015), Econsult Solutions (2018), Piktochart (2018)

8.5 TAX REVENUE IMPACT FROM CAPITAL INVESTMENTS

Notre Dame's capital investments are also a significant contributor of tax revenues to the State of Indiana government. Direct capital investments help create construction jobs and support local construction companies and their suppliers, all of which generate sales taxes to the City of South Bend and income, sales, and business taxes to Indiana. In aggregate, direct capital investments by Notre Dame generate about $10.1 million in Indiana tax revenues (and, to a lesser degree, they also yield tax revenue to various local jurisdictions, including the City of South Bend) (see Table 8.2). In addition to increased tax revenue induced by the economic activity Notre Dame generates, the University also contributes to City revenues in the form of permits and fees whenever it undertakes a major construction project.

TABLE 8.2 – ESTIMATED ANNUAL TAX REVENUE IMPACT FROM THE UNIVERSITY OF NOTRE DAME CAPITAL INVESTMENTS WITHIN SOUTH BEND AND THE STATE OF INDIANA (IN $M)

Tax Type	South Bend	State of Indiana
Income Tax	$0.5	$4.1
Sales Tax	-	$5.4
Business Tax	-	$0.6
Total Tax Revenue	**$0.5**	**$10.1**

Source: Notre Dame (2018), Econsult Solutions (2018), IMPLAN (2015)

8.6 WHY IMPACT FROM CAPITAL INVESTMENTS MATTERS

Beyond the impact produced by its operations, Notre Dame's capital investments produce additional impact at a local, regional, statewide, and national level, including $478 million in annual economic activity within the state economy. These investments represent a significant amount of economic opportunity for the local construction sector, but also support activity and employment in many other support industries.

These capital expenditures represent an investment in the present quality and future potential of Notre Dame. By enhancing its physical campus, Notre Dame improves its ability to attract and engage students and faculty, enabling the present impact and laying the foundation for future impact. This impact is not only economic, as measured in jobs and tax revenues, but is also symbolic and societal in nature. In addition to expansions on campus, Notre Dame carries out its mission of ensuring that Catholic character informs all endeavors by allocating resources and collaborating with external entities for the greater good of the community outside of the Notre Dame campus. Examples of this commitment to stewardship and catholic character off campus can be seen in both the revitalization of the Northeast Neighborhood and the Robinson Community Learning Center.

9.0 CONCLUSION

9.1 AGGREGATE ECONOMIC IMPACT

The University of Notre Dame's aggregate economic impact derives from direct, indirect, and induced effects in five mutually exclusive categories of economic activity directly attributable to the institution:

1. *Annual Operations,* including the broad base of employment, procurement, and administration activities that comprise the daily activities of the institution. These impacts are estimated at $1.6 billion annually within the region.

2. *Wage Premium*, reflecting the incremental earning and spending power of the local workforce attributable to the educational activities of Notre Dame. These impacts are estimated at $67 million annually within the region.

3. *Student and Visitor Spending,* reflecting off-campus expenditures by students and visitors drawn to the area by Notre Dame that support the local hospitality, food and retail industries. These impacts are estimated at $83 million annually within Indiana.

4. *Event Spectator Spending*, reflecting off-campus expenditures by visitors drawn to the area by Notre Dame athletic, alumni , and cultural events that support the local hospitality, food and retail industries. These impacts are estimated at $207 million annually within the region.

5. *Capital Investments*, including the large-scale construction and renovation of academic facilities. These impacts are estimated at $427 million annually within the region.

In aggregate, Notre Dame generates an annual economic impact of approximately $2.46 billion within the region, supporting nearly 16,700 jobs and $923 million in earnings (see Table 9.3). $2.0 billion of that impact takes place within South Bend, supporting 12,900 jobs and $789 million in earnings (see Table 9.1).

TABLE 9.1 – AGGREGATE ECONOMIC IMPACT OF NOTRE DAME IN SOUTH BEND

Impact Type	Operations	Wage Premium	Student and Visitor Spending	Event Spectator Spending	Capital Investment	Total
Total Output ($M)	$1,360	$37	$62	$153	$355	**$1,967**
Employment (FTE)	8,500	100	400	1,500	2,400	**12,900**
Earnings ($M)	$600	$11	$12	$43	$123	**$789**

TABLE 9.2 – AGGREGATE ECONOMIC IMPACT OF NOTRE DAME IN ST. JOSEPH COUNTY

Impact Type	Operations	Wage Premium	Student and Visitor Spending	Event Spectator Spending	Capital Investment	Total
Total Output ($M)	$1,583	$63	$83	$207	$427	**$2,364**
Employment (FTE)	10,000	400	600	2,000	2,900	**15,900**
Earnings ($M)	$662	$18	$17	$60	$144	**$901**

TABLE 9.3 – AGGREGATE ECONOMIC IMPACT OF NOTRE DAME IN THE 3 COUNTY REGION

Impact Type	Operations	Wage Premium	Student and Visitor Spending	Event Spectator Spending	Capital Investment	Total
Total Output ($M)	$1,594	$67	$92	$256	$453	**$2,462**
Employment (FTE)	10,000	500	700	2,500	3,000	**16,700**
Earnings ($M)	$664	$19	$18	$71	$150	**$923**

TABLE 9.4 – AGGREGATE ECONOMIC IMPACT OF NOTRE DAME IN INDIANA

Impact Type	Operations	Wage Premium	Student and Visitor Spending	Event Spectator Spending	Capital Investment	Total
Total Output ($M)	$1,608	$160	$101	$292	$478	**$2,638**
Employment (FTE)	10,100	1,100	800	2,700	3,100	**17,800**
Earnings ($M)	$666	$44	$20	$79	$155	**$964**

Importantly, these economic impacts produce tax revenues for various government jurisdictions, thus helping fund essential public services and public education. Hence, though Notre Dame is tax-exempt, it is still tax-generating. In particular, it produces a significant amount of tax revenues for the State of Indiana government through the economic impact of its annual operations, and capital investments of spending drawn into the region by students and visitors, and of the increased household earnings enjoyed by its alumni. Across the five non-overlapping economic impact categories analyzed in this report, it is estimated that Notre Dame generates $52 million in tax revenues each year for the State (see Table 9.5).

TABLE 9.5 – AGGREGATE ANNUAL FISCAL REVENUE GENERATED BY NOTRE DAME TO THE STATE OF INDIANA (IN $M)

Fiscal Impact	Operations	Wage Premium	Student and Visitor Spending	Event Spectator Spending	Capital Investments	Total
Income	$19.1	$5.5	$0.5	$2.1	$4.1	**$31.3**
Sales	$6.4	$2.0	$1.4	$3.6	$5.4	**$18.8**
Business	$0.8	$0.2	$0.2	$0.4	$0.6	**$2.2**
Total	**$26.3**	**$7.7**	**$2.1**	**$6.1**	**$10.1**	**$52.3**

9.2 WHY THIS MATTERS

An important takeaway from this analysis is the set of headline expenditure, employment, and tax revenue impacts produced by Notre Dame's annual operations, the wage premium enjoyed by graduates who stay in the region, its capital investments, and ancillary spending by students, and visitors. This report utilized standard university economic impact methodologies and found that Notre Dame is a major economic engine for the state of Indiana and the South Bend-Elkhart region.

While Notre Dame is an economic engine, it is important to recognize how Notre Dame's core values of Catholic character, regional collaboration, and scholarship inspire these activities. Indeed, the University strives for all aspects of its operations—academic, research, service, and athletics—to be infused with an ethos of social impact and engagement. It is through this lens of regionalism and collaboration that Notre Dame builds upon its strategic initiatives and contributes to the emergent regional partnerships that will drive the future of the South Bend-Elkhart community.

Notre Dame is in the middle of a 20 year research and innovation arc—one that started with the growth of a research enterprise that has doubled since 1999 and is now seeing the results as innovation and entrepreneurial pursuits expand rapidly both on campus and nearby. The expansion of these research and innovation activities has dovetailed with the South Bend-Elkhart region's own strategic priorities to create a future economic development blueprint for the region.

1. **Catholic Character:** Notre Dame's local engagement efforts are particularly anchored by a faith-driven mission and therefore a desire to serve and engage its community and region. Notre Dame's commitment to making its campus an amenity for others, its funding of a wide range of public-serving functions otherwise expected of municipal



government, and its deployment of students, faculty and staff into the region for community service and service learning efforts are an investment in the community and region. These initiatives and investments fulfill the institution's educational and social mission and further reflect Notre Dame's Catholic perspective.

2. **Undergraduate Education:** Notre Dame seeks to make its intellectual community a diverse and inclusive one, whereby it can speak timeless truths to contemporary contexts for the greatest good to the greatest number of people. This is the setting it cultivates on campus, which both attracts and produces people who graduate from Notre Dame and go on to do great societal good in a wide range of professions, such that whether they are politicians or professors, social workers or start-up entrepreneurs, they are combining an excellent academic foundation with a desire and ability to affect lasting social impact.



3. **Research and Scholarship:** An expanding research and innovation footprint affords Notre Dame with unique opportunities to tackle research questions, particularly in the public health space, drawing resources into Indiana and leveraging statewide partnerships that strengthen the value of that funding. In addition, Notre Dame's research enterprise is driven by a mission to do good in the region, an outlook that is present not only in its research but also in an increased focus on developing that research into technology and business activities that grow the regional economy. In today's global knowledge economy, collaborative partnerships between universities and their host regions are essential to a region's competitiveness; regional centers for research and innovation like Notre Dame's Innovation Park, South Bend's Ignition Park, and the Renaissance District will be the key to Notre Dame and South Bend-Elkhart's continued success.



4. **Stewardship:** Notre Dame aims to foster the University's mission through superb stewardship of its human, physical, and financial resources. Because of this stewardship, many alumni and benefactors generously give back to the University, trusting in Notre Dame's mission and understanding their gifts will be managed wisely. These endowments continue the expansion of human



and physical capital available to the Notre Dame community and, in turn, generate further economic impacts and societal benefits throughout Indiana.

5. **External Engagement**: Notre Dame's mission is to impart a Catholic-centered education on its students. Part of that education is looking outward, into the community, region and broader world, by sharing not only the University's resources but also its values-driven perspective with others. Notre Dame views its collaboration with partners in the South Bend-Elkhart region and throughout the State of Indiana as essential to building the area's economic growth through a uniquely Catholic lens.



All of these dimensions of Notre Dame's strategic plan are what make Notre Dame's economic impacts possible, and they are also what make these impacts matter. Therefore, economic impacts are not ancillary to Notre Dame's institutional mission but rather are a result of the process of pursuing Catholic-centered values of scholarship, service and research. These efforts are at the core of Notre Dame's institutional mission, driving an inclusive focus with the surrounding region and enabling Notre Dame to have a significant economic impact throughout the South Bend-Elkhart region and the State of Indiana.

APPENDIX A – REPORT METHODOLOGY

This section describes the methodology used to estimate the full range of economic activity, tax revenue generation, and social impact associated with the University of Notre Dame's direct economic activity. Economic impact estimates are generated by utilizing standard input-output models to translate an initial amount of direct economic activity into the total amount of economic activity that it supports. This includes multiple waves of spillover impacts generated by spending on goods and services and by spending of labor income by employees. The description that follows reviews the scope of that analysis and describes the basic methodologies, tools, and concepts utilized to quantify the economic, fiscal and, social impact of Notre Dame (see Appendix C for additional detail).

ADDITIVE VS. ILLUSTRATIVE

While a variety of impacts associated with Notre Dame's activities are analyzed and described within this report, care has been given to understanding which impacts are unique and therefore sum to the total economic and tax revenue impact figures documented in the conclusion of the report.

- Methodologies used to estimate impacts in Sections 2, 5, 6, 7, and 8 (Annual Operations, Wage Premium, Student and Visitor Ancillary Spending, Event Participant and Spectator Ancillary Spending, and Capital Investments, respectively) are chosen to ensure that these impacts are mutually exclusive and therefore additive. For example, Section 7 only includes spending by students and visitors that is "ancillary" (i.e. not accruing to Notre Dame through categories like on campus room and board), and therefore are not reflected as part of the operations quantified in Section 3.

- Impacts described in Sections 3 and 4 (Community Engagement and Local Impact, and Scholarship, Research, and Innovation) largely stem from programs and efforts originating within Notre Dame's operating budget. Therefore, these impacts cannot be added to impacts from operations calculated in Section 2 without some degree of double counting. These sections therefore focus on the qualitative implications of Notre Dame's activity and are illustrative of different ways Notre Dame produces a local or global social impact.

GENERATING THE COUNTERFACTUAL ("COMPARED TO WHAT?")

It is important for an economic impact study of this type to clearly define the counterfactual scenario against which the economic impact of the institution is being measured. Differing conceptual and methodological approaches to which impacts are appropriately attributable to universities can yield wide variation in reported results, yet these assumptions too often remain implicit rather than explicit within the study methodology.

Broadly, economic impact reports can estimate the magnitude of either the total gross impact of an institution (or project, policy, etc.) or its net impact. In a gross impact analysis, overall impact amounts are determined for an institution without regard to what activity would have otherwise taken place in the geography absent that institution. A net impact analysis develops a counterfactual scenario which attempts to estimate activity levels that would have occurred in place of the institution in question, and nets those activity levels out of the total institutional impact.

This analysis, like most standard economic impact analyses, broadly utilizes a gross impact approach. This methodology is appropriate in part because alternative development paths are largely speculative. For example, simulating alternative uses for Notre Dame's campus or the alternative development of the South Bend-Elkhart regional economy since the institution's arrival in South Bend in 1842 would produce a wide range of results that could not be reliably compared to the known activity level of the University. Indeed, it is unknown whether level of activity "replacing" the University would represent a net positive or negative for the local economy. While University activity may "crowd out" activity in other sectors (particularly with respect to the physical footprint of the campus), knowledge activity also generates significant spillovers into the broader regional economy, and the human and intellectual capital effects of premier research institutions are major business attractors.

In addition, this analysis employs a counterfactual in which Notre Dame does not exist, rather than a scenario in which the identical activities are somehow transported to a different geography, or one in which other universities increase their activity levels by a commensurate amount to absorb this lost activity. Thus, the benefits to employees and students of the University are not understood to be simply shifted in their geographic scope, but representative of an overall increase in level of activity in the educational sector due to the existence of Notre Dame.[24] Further, from a geographic standpoint, benefits are not confined to those residents that would have been within the geographic boundaries absent of the University, but rather reflect the role of the institution in drawing activity into the region, which includes the importation of new students, faculty, administrators and researchers who would likely reside and work elsewhere absent Notre Dame.

[24] Note that while specific University of Notre Dame students, faculty, and administrators would more than likely find alternative universities absent Notre Dame, that shift would in turn "bump" students or employees from those universities to another university, and so on throughout the educational sector, until eventually a set of current students and employees were underserved due to the overall decrease in the size and activity of the sector.

APPENDIX B – DIRECT ECONOMIC ACTIVITY DETAIL

The methodology described below details the process and calculations for arriving at estimates of direct economic activity in the four economic impact categories quantified within this report (ongoing operations, capital investments, ancillary spending, and wage premium). Those direct amounts are then translated into the total economic, employment, and fiscal impacts shown within the body of this report through the economic and fiscal modeling (described in Appendix C.)

B.1 ANCILLARY SPENDING

Ancillary spending represents expenditures by Notre Dame students and visitors that are captured by local merchants rather than by the institution itself.[25] This spending (referred to as "ancillary" throughout this report) is therefore additive to the other categories of direct activity (operations, capital expenditures and wage premium) calculated in this analysis.

Ancillary spending is undertaken by students attracted or retained in the region by Notre Dame, and by visitors drawn to the region by the University. In Notre Dame's case, visitation includes both general event visitors (drawn for a variety of reasons including family events, alumni events and conferences) and athletic event visitors (including spectators and participants). Estimating the magnitude and composition of ancillary spending captured in the local economy for each of these categories follows the same basic three-step process:

1. First, the volume and composition of Notre Dame students and visitors are estimated by type (by type of residence in the case of students and by distance traveled in the case of visitors).

2. Next, a per capita spending profile for each student and visitor type is estimated, accounting for only the portion of that spending that is ancillary (i.e. not captured). Combining the volume of students or visitors by their per capita spend yields an estimate of aggregate ancillary spending by industry.

3. Finally, an adjustment is then made to include only the portion of spending estimated to take place within each geography of interest. This yields estimates of ancillary spending captured within South Bend, St. Joseph County, the three county region (St. Joseph Elkhart and Marshall Counties), and Indiana.

Each of the three-steps for each category of spending is discussed in turn below.

[25] Spending that accrues to Notre Dame, such as student tuition and on-campus room and board, or event revenue, becomes operating revenue for the university. Therefore, its impact is already captured within the ongoing operations section of this analysis, and must be excluded from this category in order to ensure that impact categories are non-overlapping.

STUDENT SPENDING

STUDENT VOLUME AND DISTRIBUTION

Notre Dame provided the number of students enrolled in Fall 2017: 8,576 undergraduates and 3,891 graduate students, for a total of 12,467 students.

The majority of Notre Dame undergraduates live on campus, with just 38% living off campus. Nineteen students are listed as part-time. For the purpose of this analysis, those students are considered commuters. Of the graduate population, 497 students live on campus, 3,038 live off campus, and 193 are considered commuters. Additionally, not all enrolled students are on campus in a given year due to opportunities like studying abroad, so 4% of students are considered to be off-site (see Table B.1).

TABLE B.1 – STUDENT DISTRIBUTION BY RESIDENTIAL LOCATION

Student Type	Total	On-Campus	Commuter	Off-Campus	Off-Site
Undergraduates	8,576				
Residential Location (%)		75%	0%	20%	5%
Residential Location (#)		6,453	19	1,716	388
Graduate Students	3,891				
Residential Location (%)		13%	5%	78%	4%
Residential Location (#)		497	193	3,038	163
Total	12,467				
Residential Location (%)		56%	2%	38%	4%
Residential Location (#)		**6,950**	**212**	**4,754**	**551**

Source: University of Notre Dame

ANCILLARY SPENDING BY STUDENT TYPE

Next, spending profiles are estimated for each of the three student types, with adjustments for expenditures captured by Notre Dame to yield only "ancillary" expenditures. Data provided by the Office of Admissions details an estimated annual student budget for residents. This budget is inclusive of all spending estimated to be undertaken by a student in the course of the academic year, not just costs directly related to their education (like tuition and fees and books). From this budget, similar budgets are constructed for commuter and off-campus students.

Estimates are made of the portion of expenditures in each of four categories that are ancillary (i.e. not captured by Notre Dame). In the case of housing for on-campus students, all expenditures are captured by Notre Dame. Further, food and beverage is assumed to be largely captured by Notre Dame for these on-campus students via the meal plan, although a small portion is assumed to be spent off campus. Conversely, most food spending for off-campus students and most retail spending (including books and supplies) for all students is assumed to be ancillary, with a small portion captured by Notre Dame through on-campus options like the bookstore and on campus cafes.

Combining the estimated per student expenditures with the estimated ancillary percentages yields an estimated ancillary spend per student for each student type and expenditure category (see Table B.2).

TABLE B.2 – ANCILLARY PER STUDENT SPENDING BY STUDENT TYPE

Category	On-Campus	Commuter	Off-Campus	Basis
Housing	$8,354	$0	$8,354	On-campus: captured by ND Commuter: no additive spending
Ancillary (%)	0%	0%	100%	
Ancillary ($)	$0	$0	$8,354	
Food & Beverage	$7,056	$0	$7,056	On-campus: primarily dining hall
Ancillary (%)	10%	0%	90%	Commuter: no additive spending
Ancillary ($)	$705.60	$0.00	$6,350.40	Off-Campus: some on-campus spend
Transportation	$750	$1,750	$750	
Ancillary (%)	100%	100%	100%	No spend captured by ND
Ancillary ($)	$750	$1,750	$750	
Personal Expenses	$1,200	$500	$1,200	
Ancillary (%)	90%	100%	100%	Most spending not captured by ND
Ancillary ($)	$1,080	$500	$1,200	
Books and Supplies	$1,050	$1,050	$1,050	
Ancillary (%)	10%	10%	10%	Some spend captured by ND (such as supplies and apparel at bookstore)
Ancillary ($)	$105	$105	$105	
Total	$18,410	$3,300	$18,410	
Ancillary (%)	14%	71%	91%	Blended average
Ancillary ($)	**$2,641**	**$2,355**	**$16,759**	

Source: University of Notre Dame, Econsult Solutions

The ancillary spending profiles per student are then combined with the volume of students from Table B.2 above to yield the total volume of annual ancillary expenditures by student type. In aggregate, it is estimated that ancillary expenditures for Notre Dame students total nearly $98.5 million per year, with the majority of those expenditures coming from off-campus students (see Table B.3).

TABLE B.3 – AGGREGATE ANCILLARY STUDENT SPENDING

Category	On-Campus	Commuter	Off-Campus	Total
Number of Students	**6,950**	**212**	**4,754**	**11,916**
Housing (per student)	$0	$0	$8,354	
Aggregate ($M)	$0	$0	$39.7	$39.7 million
Food & Beverage (per student)	$706	$0	$6,350	
Aggregate ($M)	$4.9	$0.0	$30.2	$35.1 million
Transportation (per student)	$750	$1,750	$750	
Aggregate ($M)	$5.2	$0.4	$3.6	$9.1 million
Personal Expenses (per student)	$1,080	$500	$1,200	
Aggregate ($M)	$7.5	$0.1	$5.7	$13.3 million
Books & Supplies (per student)	$105	$105	$105	
Aggregate ($M)	$0.7	$0.0	$0.5	$1.3 million
Total (per student)	**$2,641**	**$2,355**	**$16,759**	
Aggregate ($)	**$18.4 million**	**$0.5 million**	**$79.7 million**	**$98.5 million**

Source: Econsult Solutions. Rows and columns may not sum due to rounding

STUDENT SPENDING BY GEOGRAPHY

Finally, aggregate spending is adjusted to account for transactions that do not take place within the local geographies of interest. Student spending may leak outside of the local geography in two ways. First, students may travel to a different geography and spend dollars there (such as food and beverage or entertainment purchases that may take place in Illinois). Second, students may purchase items online (ranging from basic supplies to textbooks), in which case the transaction is also not likely to be captured locally.

Estimates are made for each category of the proportion of spending captured within each geography of interest (South Bend, St. Joseph County, three county region, and Indiana). In the case of housing, food and beverage, and transportation spending, estimates are based largely on the likelihood of students living or travelling outside of the geography (which decreases with each successive expansion of the geographic radius). In the case of retail spending, local capture is assumed to be much lower (given the increasing prevalence of online purchases).

Combining the estimated aggregate expenditures by category with the local capture estimates yields the total ancillary student spending that is estimated to be captured within each geography (see Table B.4).

TABLE B.4 – AGGREGATE ANCILLARY STUDENT SPENDING BY GEOGRAPHY

Category	Total Ancillary	South Bend	St. Joseph County	Three County Region	Indiana
Housing	$39.7 million				
Local Capture (%)		75%	90%	95%	100%
Local Capture ($M)		$29.8	$35.7	$37.7	$39.7
Food & Beverage	$35.1 million				
Local Capture (%)		75%	90%	95%	100%
Local Capture ($M)		$26.32	$31.58	$33.34	$35.09
Transportation	$9.1 million				
Local Capture (%)		20%	33%	45%	50%
Local Capture ($M)		$1.83	$3.02	$4.12	$4.57
Personal Expenses	$13.3 million				
Local Capture (%)		20%	33%	45%	50%
Local Capture ($M)		$2.66	$4.39	$5.99	$6.66
Books & Supplies	$1.3 million				
Local Capture (%)		20%	33%	45%	50%
Local Capture ($M)		$0.25	$0.42	$0.56	$0.63
Total	**$98.5 million**				
Local Capture (%)		62%	76%	83%	88%
Local Capture ($)		**$60.8 million**	**$75.2 million**	**$81.7 million**	**$86.7 million**

Source: Econsult Solutions. Rows and columns may not sum due to rounding

STUDENT VISITOR SPENDING

VISITOR VOLUME AND DISTRIBUTION

Information provided by Notre Dame on annual attendance in a variety of categories are combined with available proxy information to estimate the volume of visitors to students and the distribution of those visitors by type. Attendance estimates were provided for prospective student visits, admitted student visits, and family events (including family weekend, orientation, and commencement).

Attendees at these events were then divided into local / students (whose spending is not new to the local economy), regional visitors on a day trip (not staying overnight), and overnight visitors. Where available, proxy indicators of geographic distance appropriate to each category were utilized. For example, data on the geographic distribution of students was used as a proxy for family visitation, while data on the geographic distribution of alumni were used for alumni events. Where data was not available, conservative estimates were made (which assume attendance to be largely local). Matching these distributions to attendance estimates yields an estimate of the annual volume of visitors by type (see Table B.5).

TABLE B.5 – STUDENT VISITATION BY VISITOR TYPE

Category	Total Attendees	Local / Student	Regional (Day Trip)	Overnight Trip
Geographic Distribution		**10%**	**25%**	**65%**
Prospective Students	71,400			
Attendees (#)		7,140	17,850	46,410
Admitted Students	3,700			
Attendees (#)		370	925	2,405
Move in / out	2,100			
Attendees (#)		210	525	1,365
Junior Parents Weekend	4,000			
Attendees (#)		400	1,000	2,600
Commencement	24,000			
Attendees (#)		2,400	6,000	15,600
Total	**105,200**			
Attendees (#)		**10,520**	**26,300**	**68,380**

Source: University of Notre Dame, Econsult Solutions. Rows and columns may not sum due to rounding

ANCILLARY SPENDING BY STUDENT VISITOR TYPE

Next, profiles of per capita visitor spending are developed for different visitor types. Profiles are based on travel allowances developed by U.S. General Services Administration for South Bend, and supplemented with national traveler survey data to form the basis of spending estimates for food, lodging, transportation, and retail categories.[26] Expenditures from students and local visitors are excluded from the analysis, since they do not represent net new expenditures in the region.[27]

Combining the estimated expenditures by visitor type with the estimated volume of visitors in each category yields the total ancillary spending associated with these events on an annual basis (see Table B.6).

[26] This information is drawn from Travel USA® syndicated survey data panel operated by Longwoods International, which surveys hundreds of thousands of travelers nationwide each year on their travel destinations, activities, and expenditures.

[27] Locals and students attending Notre Dame events are likely to have some volume of ancillary spending associated with the activity, if for example they stop for food near campus before or after the event. In most cases, this spending is likely shifted from some other expenditure that would have taken place within the geography (such as stopping for food in another location, eating at home, etc.). It is possible that this activity spurs some additional net spending, or shifts spending between geographies (such as from elsewhere in the county into South Bend) but these amounts are likely to be small and are excluded from this analysis.

TABLE B.6 – ANCILLARY PER STUDENT VISITOR SPENDING BY VISITOR TYPE

Category	Local / Student	Regional (Day Trip)	Overnight Trip	Total
Number of Visitors	**10,520**	**26,300**	**68,380**	**105,200**
Lodging (per visitor)	$0	$0	$49	
Aggregate ($)	--	--	$3.3	$3.3 million
Food & Beverage (per visitor)	$0	$23	$59	
Aggregate ($)	--	$0.6	$4.0	$4.6 million
Transportation (per visitor)	$0	$9	$16	
Aggregate ($)	--	$0.2	$1.1	$1.3 million
Other (Retail) (per visitor)	$0	$29	$47	
Aggregate ($)	--	$0.8	$3.2	$4 million
Total (per visitor)	$0	$61	$171	
Aggregate ($)	--	**$1.6 million**	**$11.7 million**	**$13.3 million**

Source: Econsult Solutions, U.S. Government Services Administration, Longwoods International
Rows and columns may not sum due to rounding

STUDENT VISITOR SPENDING BY GEOGRAPHY

Finally, as with student spending, aggregate spending is adjusted to account for transactions that do not take place within the local geographies of interest. Estimates are again made for each category of the proportion of spending captured within each geography of interest (South Bend, St. Joseph County, the three county region, and Indiana).

In categories like food and beverage, transportation, and retail, local capture rates are anticipated to be relatively higher than for student spending, since online purchases are not a material part of a visitor spending profile.

Combining the estimated aggregate expenditures by category with the local capture estimates yields the total ancillary spending associated with these events that is estimated to be captured within each geography (see Table B.7).

TABLE B.7 – AGGREGATE STUDENT VISITOR SPENDING BY GEOGRAPHY

Category	Total Ancillary	South Bend	St. Joseph County	Three County Region	Indiana
Lodging	$3.3 million				
Local Capture (%)		75%	80%	85%	90%
Local Capture ($M)		$2.5	$2.7	$2.8	$3.0
Food & Beverage	$4.6 million				
Local Capture (%)		75%	80%	85%	90%
Local Capture ($M)		$3.5	$3.7	$3.9	$4.2
Transportation	$1.3 million				
Local Capture (%)		50%	60%	70%	80%
Local Capture ($M)		$0.7	$0.8	$0.9	$1.1
Other (Retail)	$4 million				
Local Capture (%)		75%	80%	85%	90%
Local Capture ($M)		$3.0	$3.2	$3.4	$3.6
Total	**$13.3 million**				
Local Capture (%)		42%	57%	90%	95%
Local Capture ($)		**$9.6 million**	**$10.3 million**	**$11.1 million**	**$11.8 million**

Source: Econsult Solutions. Rows and columns may not sum due to rounding

ATHLETICS VISITOR SPENDING

ATHLETIC VISITOR VOLUME AND DISTRIBUTION

In addition to students and their visitors, Notre Dame athletic events draw visitors and spending into the local economy. Each year, athletic events attract over 1 million attendees. The majority of those attendees are associated with fall football weekend. The large scale of football weekends, which in Fall 2017 attracted over 500,000 attendees and participants, warrant consideration as a separate ancillary spending category. As such, this subsection focuses on non-football athletic events, and the next section takes a close look at the impact of Notre Dame Football.

Based on information from Notre Dame, athletic events attract approximately 443,860 attendees each year. The majority of these attendees are assumed to be students, faculty, and local residents. Twenty-five percent are estimated to be regional visitors, and 10 percent are overnight trips (see Table B.8).

TABLE B.8 –ATHLETIC VISITATION BY VISITOR TYPE

Category	Total Attendees	Local / Student	Regional (Day Trip)	Overnight Trip
Men's Soccer	15,610			
Women's Soccer	12,330			
Volleyball	11,860			
Men's Basketball	162,390			
Women's Basketball	130,400			
Notre Dame Hockey	67,190			
Baseball	9,700			
Softball	4,720			
Men's Lacrosse	19,050			
Women's Lacrosse	10,610			
Total	**443,860**			
Share of Attendees (%)		65%	25%	10%
Attendees (#)		**288,500**	**111,000**	**44,400**

Source: University of Notre Dame, Econsult Solutions

Using the spending profiles developed in the student visitor section, the 111,000 regional visitors are estimated to spend $6.8 million when attending athletic events, and the 44,400 overnight visitors spend $7.6 million. In total, visitors to Notre Dame athletic events spend $14.3 million each year (see Table B.9). Note that this amount does not include spending directly with the University, such as on tickets or concessions, which is captured in Notre Dame's operating budget.

TABLE B.9 – ANCILLARY PER VISITOR SPENDING BY ATHLETICS VISITOR TYPE

Category	Local / Student	Regional (Day Trip)	Overnight Trip	Total
Number of Visitors	**288,500**	**111,000**	**44,400**	**443,900**
Lodging (per visitor)	$0	$0	$49	
Aggregate ($M)	--	--	$2.2	$2.2 million
Food & Beverage (per visitor)	$0	$23	$59	
Aggregate ($M)	--	$2.6	$2.6	$5.2 million
Transportation (per visitor)	$0	$9	$16	
Aggregate ($M)	--	$1.0	$0.7	$1.7 million
Retail / Entertainment (per visitor)	$0	$29	$47	
Aggregate ($M)	--	$3.2	$2.1	$5.3 million
Total (per visitor)	**$0**	**$61**	**$171**	
Aggregate ($)	**--**	**$6.8 million**	**$7.6 million**	**$14.3 million**

Source: Econsult Solutions. Rows and columns may not sum due to rounding

While visitors to athletic events spend $14.3 million each year, a portion of that spending occurs outside of our geographies of interest, and is considered leakage from the local economy. In total, 72 percent of spending is estimated to occur in South Bend, 78 percent in St. Joseph County, 83 percent in the three county region, and 89 percent in Indiana. Applying the percent of spending in each category estimated to occur in each geography yields the amount of spending that is captured locally.

TABLE B.10 – AGGREGATE ATHLETICS VISITOR SPENDING BY GEOGRAPHY

Category	Total Ancillary	South Bend	St. Joseph County	Three County Region	Indiana
Lodging	$2.2 million				
Local Capture (%)		75%	80%	85%	90%
Local Capture ($M)		$1.6	$1.7	$1.8	$1.9
Food & Beverage	$5.2 million				
Local Capture (%)		75%	80%	85%	90%
Local Capture ($M)		$3.9	$4.1	$4.4	$4.7
Transportation	$1.7 million				
Local Capture (%)		50%	60%	70%	80%
Local Capture ($M)		$0.9	$1.0	$1.2	$1.4
Retail / Entertainment	$5.3 million				
Local Capture (%)		75%	80%	85%	90%
Local Capture ($M)		$4.0	$4.2	$4.5	$4.8
Total	**$14.3 million**				
Local Capture (%)		72%	78%	83%	89%
Local Capture ($)		**$10.3 million**	**$11.1 million**	**$11.9 million**	**$12.7 million**

Source: Econsult Solutions. Rows and columns may not sum due to rounding

FOOTBALL WEEKEND VISITOR SPENDING

FOOTBALL WEEKEND VISITOR VOLUME

Data provided by Notre Dame for the Fall 2017 football season show 657,758 total attendees and participants for the seven football weekends Notre Dame hosted that season. Spring game attendees are included with other athletic events for the purposes of this analysis.

The 657,758 total attendees and participants includes Notre Dame students, faculty and staff, Notre Dame and visiting team fans, media, athletes on the visiting teams, and sports recruits. Included in this figure and in addition to the fans in the stadium, a considerable number of fans come to campus to tailgate before and during the game. It is estimated that tailgaters without tickets represent additional attendees equal to 25 percent of the number of ticketed attendees, and it is believed that for certain games this figure can rise to 50 percent of the number of ticketed attendees.

Of the total attendees across all categories, 33 percent are estimated to be local, including Notre Dame students, faculty, and staff. ESI estimates that 46 percent make the visit an overnight trip. The remaining 21 percent are estimated to be regional visitors. Applying estimated geographic distribution by visitor type to the total attendees yields an estimate of total visitors by origin (see Table B.11).

TABLE B.11 – FOOTBALL WEEKEND VISITORS BY VISITOR TYPE

Category	Total Attendees	Local / Student	Regional (Day Trip)	Overnight Trip
Football				
ND student/faculty/staff	106,464	100%	0%	0%
ND fans (non-student/faculty/staff)	388,986	20%	20%	60%
Visiting fans	26,245	20%	20%	60%
Football Media	1,826	10%	20%	70%
Football Visiting Teams	1,400	0%	0%	100%
Other Tailgaters (no tickets)	130,424	20%	40%	40%
Sports Recruits	2,413	10%	20%	70%
Total	**657,758**			
Share of Attendees (%)		33%	21%	46%
Attendees (#)		**216,019**	**136,063**	**305,675**

Source: University of Notre Dame, Econsult Solutions

ANCILLARY SPENDING BY FOOTBALL WEEKEND VISITOR TYPE

For football weekends, the spending profiles for day visitors match those used in other sections of the report. However, due to increased demand, lodging costs in the South Bend area are materially higher over football weekends. Hotel data provided by Visit South Bend shows that the average hotel room costs $290 per night over football weekends. Many visitors chose to rent a house for the weekend rather than stay in a hotel, taking advantage of vacation rental booking sites like Airbnb and Rent Like A Champion. Two visitors per room is assumed for hotels, but rented homes average more guests per unit. Taking into account the often high rental rate, the average per night cost for hotel and rental stays works out to $290 per visitor. A two-night trip is assumed for all overnight visitors.

Spending that is captured by the University, like ticket sales, concessions, and bookstore purchases, is not included in the spending profiles.

Combining the estimated expenditures by visitor type with the estimated volume of visitors in each category yields the total ancillary spending associated with football weekends (see Table B.12).

TABLE B.12 –ANCILLARY SPENDING PER VISITOR BY FOOTBALL WEEKEND VISITOR TYPE

Category	Local / Student	Regional (Day Trip)	Overnight Trip (Assumes 2 night trip)	Total
Number of Visitors	**216,019**	**136,063**	**305,675**	**657,758**
Lodging (per visitor)	$0	$0	$290	
Aggregate ($M)	--	--	$88.75	$89 million
Food & Beverage (per visitor)	$0	$14	$118	
Aggregate ($M)	--	$1.91	$36.07	$38 million
Transportation (per visitor)	$0	$9	$32	
Aggregate ($M)	--	$1.23	$9.78	$11 million
Retail / Entertainment	$0	$29	$71	
Aggregate ($M)	--	$3.95	$21.55	$25 million
Total (per visitor)	$0	$52	$511	
Aggregate ($)	**--**	**$7 million**	**$156 million**	**$163 million**

Source: Econsult Solutions. Rows and columns may not sum due to rounding

FOOTBALL WEEKEND VISITOR SPENDING BY GEOGRAPHY

Finally, aggregate spending by athletics visitors is adjusted to account for spending captured outside of the local geographies of interest. Spending for football weekends is assumed to occur over a larger geography than the typical Notre Dame event due to the large number of visitors these weekends attract. Based on the number of overnight visitors in town at one time, relative to local hotel supply, it is assumed that a large percentage stay outside of South Bend, which also results in more food and beverage, transportation, and entertainment spending within the three county region.

Combining the estimated aggregate expenditures by category with the local capture estimates yields the total ancillary spending associated with football weekends that is estimated to be captured within each geography.

The direct spending in St. Joseph County generated by football weekends in 2017 is estimated to be $102 million, or $15 million per game (see Table B.13).

TABLE B.13 – AGGREGATE FOOTBALL WEEKEND VISITOR SPENDING BY GEOGRAPHY

Category	Total Ancillary	South Bend	St. Joseph County	Three County Region	Indiana
Lodging	$89 million				
Local Capture (%)		35%	50%	80%	90%
Local Capture ($M)		$31.1	$44.4	$71.0	$79.9
Food & Beverage	$38 million				
Local Capture (%)		75%	80%	85%	90%
Local Capture ($M)		$28.5	$30.4	$32.3	$34.2
Transportation	$11 million				
Local Capture (%)		50%	60%	70%	80%
Local Capture ($M)		$5.5	$6.6	$7.7	$8.8
Retail / Entertainment	$25 million				
Local Capture (%)		75%	80%	85%	90%
Local Capture ($M)		$19.1	$20.4	$21.7	$22.9
Total	**$163 million**				
Local Capture (%)		59%	68%	80%	88%
Local Capture ($)		**$84 million**	**$102 million**	**$133 million**	**$146 million**
Spending Per Game		$12 million	$15 million	$19 million	$21 million

Source: Econsult Solutions. Rows and columns may not sum due to rounding

HOTEL TAX REVENUE GENERATED BY FOOTBALL WEEKEND VISITORS

Due to the large number of out of town game attendees and participants that Notre Dame football attracts, football weekends generate a significant amount of hotel tax revenue to the county, which has a hotel and motel tax of 6 percent of the room rate. Over the seven 2017 fall football weekends, hotels in the county had revenues of $15.5 million. Accounting for a small percent of hotel guests whose room night is not attributable to Notre Dame football or is not taxable, it is estimated that $840,000 of hotel tax was generated for St. Joseph County over the 2017 football season (see Table B.14).

TABLE B.14 – HOTEL TAX REVENUE GENERATED IN ST. JOSEPH COUNTY BY NOTRE DAME FOOTBALL WEEKENDS, 2017

	St. Joseph's County
Hotel Revenue over Football Weekends ($M)	$15.5
Minus Adjustment	10%
Revenue Attributable to ND Football ($M)	$13.9
Hotel Room Tax Rate	6%
Tax Revenue Generated	$840,000

Source: Visit South Bend, Econsult Solutions

LARGE SCALE EVENT VISITOR SPENDING

LARGE SCALE EVENT VISITOR VOLUME

In addition to student visitors and attendees of athletic events, Notre Dame hosts numerous events year-round that attract nearly 700,000 additional visitors to the campus each year. Attractions include alumni returning to campus, arts programing, hosted athletic events, sports camps, weddings, conferences, programs hosted by Eck Visitors Center, masses, and the school's Warren Golf Course. The percentage of visitors to each of these attractions was estimated to yield the number of local, regional, and overnight visitors attributable to each category (see Table B.15).

TABLE B.15 – EVENT VISITATION BY VISITOR TYPE

Category	Total Attendees	Local / Student	Regional (Day Trip)	Overnight Trip
Alumni	5,700			
Share of Attendees (%)		10%	20%	70%
Attendees (#)		570	1,140	3,990
Arts	79,000			
Share of Attendees (%)		75%	15%	10%
Attendees (#)		59,250	11,850	7,900
Non-Local Hosted Athletic Events	31,900			
Share of Attendees (%)		0%	25%	75%
Attendees (#)		0	7,975	23,925
Local Hosted Athletic Events	15,300			
Share of Attendees (%)		75%	20%	5%
Attendees (#)		11,475	3,060	765
Sports Camps	23,000			
Share of Attendees (%)		10%	15%	75%
Attendees (#)		2,300	3,450	17,250
Weddings	13,600			
Share of Attendees (%)		25%	25%	50%
Attendees (#)		3,400	3,400	6,800
Conferences	94,500			
Share of Attendees (%)		20%	20%	60%
Attendees (#)		18,900	18,900	56,700
Eck Visitors Center	144,100			
Share of Attendees (%)		30%	50%	20%
Attendees (#)		43,230	72,050	28,820
Masses	250,000			
Share of Attendees (%)		35%	40%	25%
Attendees (#)		87,500	100,000	62,500
Warren Golf Course	18,200			
Share of Attendees (%)		25%	35%	40%
Attendees (#)		4,550	6,370	7,280
Total	**675,300**			
Attendees (#)		**231,175**	**228,195**	**215,930**

Source: University of Notre Dame, Econsult Solutions

Using the visitor spending profiles developed earlier in this section, the total spending by large event visitors on lodging, food and beverage, transportation, and other retail is estimated. In total, these visitors spend $50.7 million annually associated with Notre Dame events (see Table B.16).

TABLE B.16 – ANCILLARY SPENDING PER EVENT VISITOR BY VISITOR TYPE

Category	Local / Student	Regional (Day Trip)	Overnight Trip	Total
Number of Visitors	**231,175**	**228,195**	**215,930**	**675,300**
Lodging (per visitor)	$0	$0	$49	
Aggregate ($M)	--	--	$10.47	$10.5 million
Food & Beverage (per visitor)	$0	$23	$59	
Aggregate ($M)	--	$5.25	$12.74	$18 million
Transportation (per visitor)	$0	$9	$16	
Aggregate ($M)	--	$2.05	$3.45	$5.5 million
Other (Retail) (per visitor)	$0	$29	$47	
Aggregate ($M)	--	$6.62	$10.15	$16.8 million
Total (per visitor)	$0	$61	$171	
Aggregate ($)	--	**$13.9 million**	**$36.8 million**	**$50.7 million**

Source: Econsult Solutions. Rows and columns may not sum due to rounding

As in previous categories of ancillary spending, not all of the total amount spent is captured in the local economy, due to various leakages. The amount spent within each geography was estimated based on the expenditure categories (see Table B.17).

TABLE B.17 – AGGREGATE EVENT VISITOR SPENDING BY GEOGRAPHY

Category	Total Ancillary	South Bend	St. Joseph County	Three County Region	Indiana
Lodging	$10.5 million				
Local Capture (%)		75%	80%	85%	90%
Local Capture ($M)		$7.9	$8.4	$8.9	$9.4
Food & Beverage	$18 million				
Local Capture (%)		75%	80%	85%	90%
Local Capture ($M)		$13.5	$14.4	$15.3	$16.2
Transportation	$5.5 million				
Local Capture (%)		50%	60%	70%	80%
Local Capture ($M)		$2.8	$3.3	$3.9	$4.4
Other (Retail)	$16.8 million				
Local Capture (%)		75%	80%	85%	90%
Local Capture ($M)		$12.6	$13.4	$14.3	$15.1
Total	**$50.7 million**				
Local Capture (%)		72%	78%	83%	89%
Local Capture ($)		**$36.7 million**	**$39.5 million**	**$42.3 million**	**$45.1 million**

Source: Econsult Solutions. Rows and columns may not sum due to rounding

ANCILLARY SPENDING TOTAL

Table B.18 combines the ancillary spending estimates by category and geography for students, student visitors, event visitors, non-football athletic visitors, and football weekend attendees. Total ancillary spending across all visitor types is $340 million.

TABLE B.18 ANCILLARY SPENDING TOTAL

Category	Total Ancillary	South Bend	St. Joseph County	Three County Region	Indiana
Student Spending ($M)					
Housing	$39.7	$29.8	$35.7	$37.7	$39.7
Food & Beverage	$35.1	$26.3	$31.6	$33.3	$35.1
Transportation	$9.1	$1.8	$3.0	$4.1	$4.6
Personal Expenses	$13.3	$2.7	$4.4	$6.0	$6.7
Books & Supplies	$1.3	$0.3	$0.4	$0.6	$0.6
Student Spending Total	**$98.5 million**	**$60.8 million**	**$75.2 million**	**$81.7 million**	**$86.7 million**
Student Visitor Spending ($M)					
Lodging	$3.3	$2.5	$2.7	$2.8	$3.0

Food & Beverage	$4.6	$3.5	$3.7	$3.9	$4.2
Transportation	$1.3	$0.7	$0.8	$0.9	$1.1
Other (Retail)	$4.0	$3.0	$3.2	$3.4	$3.6
Student Visitor Spending Total	**$13.3 million**	**$9.6 million**	**$10.3 million**	**$11.1 million**	**$11.8 million**
Event Visitor Spending ($M)					
Lodging	$10.5	$7.9	$8.4	$8.9	$9.4
Food & Beverage	$18.0	$13.5	$14.4	$15.3	$16.2
Transportation	$5.5	$2.8	$3.3	$3.9	$4.4
Other (Retail)	$16.8	$12.6	$13.4	$14.3	$15.1
Event Visitor Spending Total	**$50.7 million**	**$36.7 million**	**$39.5 million**	**$42.3 million**	**$45.1 million**
Athletics Visitor Spending (Non-Football)($M)					
Lodging	$2.2	$1.6	$1.7	$1.8	$1.9
Food & Beverage	$5.2	$3.9	$4.1	$4.4	$4.7
Transportation	$1.7	$0.9	$1.0	$1.2	$1.4
Other (Retail)	$5.3	$4.0	$4.2	$4.5	$4.8
Athletic Visitor Spending (Non-Football) Total	**$14.3 million**	**$10.3 million**	**$11.1 million**	**$11.9 million**	**$12.7 million**
Football Weekend Visitor Spending ($M)					
Lodging	$88.8	$31.1	$44.4	$71.0	$79.9
Food & Beverage	$38.0	$28.5	$30.4	$32.3	$34.2
Transportation	$11.0	$5.5	$6.6	$7.7	$8.8
Other (Retail)	$25.5	$19.1	$20.4	$21.7	$22.9
Football Weekend Visitor Spending Total	**$163 million**	**$84 million**	**$102 million**	**$133 million**	**$146 million**
Ancillary Spending Total ($M)					
Housing	$39.7	$29.8	$35.7	$37.7	$39.7
Lodging	$104.7	$43.0	$57.1	$84.6	$94.2
Food & Beverage	$100.9	$75.7	$84.2	$89.2	$94.3
Transportation	$28.7	$11.6	$14.8	$17.8	$20.2
Other (Retail)	$66.1	$41.6	$46.0	$50.4	$53.7
Total Ancillary Spending	**$340 million**	**$202 million**	**$238 million**	**$280 million**	**$302 million**

B.2 WAGE PREMIUM

Institutions of higher learning have an enduring effect on the earning potential of their graduates through their core educational mission. The link between educational attainment and earnings power is well-established, and a "wage premium" associated with additional education is often conceptualized and

calculated from the perspective of the student, who can compare the costs associated with various educational (or non-educational) options with the expected return. This analysis utilizes this framework to estimate the gain from that additional earning potential not to the student but rather to the local and state economy.

The presence of these skilled graduates in the workforce has two quantifiable effects on earnings within a given geography:

- A university increases the educational attainment level of the local workforce, which can be translated into increased earnings based on the established relationship between educational attainment and wages.
- Universities may have a specific wage premium associated with the knowledge and credentials they impart, above and beyond earning power associated with a particular degree level. The selectivity of Notre Dame and the quality of the educational experience it offers manifests itself in an additional wage premium for its graduates above and beyond the average degree-holder.

Calculating the direct wage premium within each geography is undertaken in a three-step approach:

1. First, the number of Notre Dame alumni in the workforce in each geography of interest (South Bend, St. Joseph County, the three county region, and Indiana), and the degree level of those alumni is estimated.
2. Next, the annual wage premium attributable to the Notre Dame degree for each of those attainment levels and geographies.
3. Finally, the two calculations are combined, multiplying the volume of alumni in the workforce by the annual wage premium in each geography and attainment level to yield an estimate of the aggregate annual wage premium attributable to Notre Dame.

Additional earnings by alumni in the local and state workforce attributable to the education and credentialing they received at Notre Dame are then translated into additional household spending (accounting for factors like savings and taxes). This household spending in turn supports further employment and earnings, the impacts of which are modeled through the standard input-output techniques described in Appendix C.

ALUMNI WITHIN THE WORKFORCE BY GEOGRAPHY

The link between educational location and location of employment is central to the notion of an institutionally driven wage premium in the local economy. While the proportion of college graduates retained within a local workforce varies (based on the particulars of the institution, its student body, and the geographies in question) post-graduation location decisions are impacted by educational experience, with a clear correlation between locations during and after schooling.[28]

[28] See, for example: Groen, J. A. (2004). "The Effect of College Location on Migration of College-Educated Labor." Journal of Econometrics, 121(1), 125-142.

The presence of a selective institution like Notre Dame has a significant impact on the composition, educational attainment, and skill level of the local workforce. From an economic standpoint, Notre Dame graduates living and working within the region and state are either imported to those geographies (in the case of students originating from around the nation and the world) or retained within those geographies (in the case of students originating within those geographies who are retained due to the presence of the University).

Notre Dame's alumni database includes over 134,500 alumni. Alumni are listed with current known address and degree awarded. From this, the number of alumni and whether they received a bachelor's or advanced degree is determined for each geography of interest.

Next, the proportion of alumni within each geography that are actively employed, and therefore generate an annual wage premium, is estimated. National data from the Bureau of Labor Statistics indicates that the national employment to population ratio for degree holders ages 25 and older is 72 percent.[29] This ratio is applied equally to alumni in each geography to estimate the proportion currently in the workforce (see Table B.19).

TABLE B.19 – ESTIMATED NOTRE DAME ALUMNI WITHIN THE WORKFORCE BY GEOGRAPHY

Category	Total	South Bend	St. Joseph County	Three County Region	Indiana
Total Alumni	134,587				
Share of Alumni (%)		2.30%	3.49%	3.77%	7.42%
Alumni (#)		3,098	4,703	5,079	9,984
Bachelor's Alumni (#)		2,505	3,749	3,994	7,928
Advanced Alumni (#)		593	954	1,085	2,056
Workforce Participation Rate	72%				
Bachelor's Alums in Workforce (#)		**1,804**	**2,699**	**2,876**	**5,708**
Advanced Alums in Workforce (#)		**427**	**687**	**781**	**1,480**

Source: Notre Dame University, Bureau of Labor Statistics, Econsult Solutions
Rows and columns may not sum due to rounding

ALUMNI EARNINGS PREMIUM

The link between educational attainment and earnings is well established, with Census Bureau data demonstrating a significant increase in median earnings for each increase in degree level. Increased earnings enjoyed as a result of schooling are a market-based representation of the additional productivity associated with those workers, and ultimately result in additional household spending within the local economy on other goods and services.

[29] This proportion is itself comprised of a labor force participation rate of approximately 74% and an unemployment rate of approximately 2.5%. Thus, the vast majority of non-working alumni are anticipated to be out of the labor force, rather than actively seeking employment but unable to find it. Note that this national figure may be conservative due to the selective nature of Notre Dame and its graduates.

Returns on education are also impacted by the specific university that a student attends, due to variation in both institutional quality and fields of study offered.[30] Institutions of higher education vary widely in selectivity, curricular rigor, and reputation. These qualitative factors are also reflected in the earnings potential of graduates above and beyond the level of degree attained. Academic research has demonstrated a clear correlation between the selectivity of higher education institutions and the earnings of its graduates, which again reflects a market-based valuation of enhanced productivity.[31]

Longitudinal data from the federal Department of Education indicates that Notre Dame graduates earn a considerable premium above median earnings by education level. The Department of Education releases the College Scorecard annually, which reports the median earnings by education level of graduates ten years after they entered school, based on unique tracking of tax filings of students who applied for student loans. This comprehensive data source indicates that the median salary ten years after entering Notre Dame is $71,600.

This figure is likely a conservative estimate of the average earnings of a Notre Dame alumni currently in the workforce for a number of reasons. First, it is calculated ten years after entering school and thus reflects the salary of alumni only a few years into the workforce for many graduates. These graduates are likely to see their wages increase over time as they stay in the workforce. Second, it includes only students who seek federal financial aid for school (since this is one characteristic necessary for inclusion in the College Scorecard data set). As such, it omits students from higher income families, a characteristic which may be correlated with higher earnings. Notre Dame's commitment to making need-based financial aid available to students further limits those included in the data set. Finally, it includes earnings of all attendees ten years after entering school, regardless of whether they graduated.

Despite these caveats, this figure can be compared to national earnings by degree type as reported in the American Community Survey to estimate the differential between earnings for Notre Dame alumni and the average degree holder. Since students may have completed advanced studies within ten years after undergraduate enrollment, the $71,600 figure is most appropriately compared to a blended average of the median salaries for bachelor's and advanced degree holders nationwide, which is approximately $57,500. This differential indicates that a bachelor's degree from Notre Dame is associated with a wage premium of 24.64% relative to the average bachelor's degree.

No similar data has been identified to calculate the incremental earnings potential associated with advanced degrees from specific institutions. Earnings for advanced degree holders tend to vary significantly by field of study, which may represent a stronger determinant of earnings potential than institutional selectivity. Accordingly, the premium observed for Notre Dame advanced degree holders is

[30] For a detailed overview of anticipated lifetime earnings by degree type, see Webber, D (2014). "The Lifetime Earnings Premia of Different Majors: Correcting for Selection Based on Cognitive, non-Cognitive, and Unobserved Factors." *Labour Economics*, Volume 28, June 2014, 14-23.
[31] See for example: Hoxby, C. (2015). "Computing the Value-Added of American Postsecondary Institutions." *Internal Revenue Service Statistics of Income Division Working Paper*, July 2015; and Monks, J. (2000)."The Returns of Individual and College Characteristics: Evidence from the National Longitudinal Survey of Youth." *Economics of Education Review, 19,* 279-289.

conservatively estimated by scaling down the premium observed for Notre Dame undergraduates by 50 percent, yielding an estimated advanced degree premium of 12.32 percent.

The percentage premiums by degree type are then applied to the median wage by educational attainment within each geography of interest to yield an estimated earnings for Notre Dame alumni by degree level within each geography (see Table B.20).[32] This approach accounts for the fact that average earnings vary by geographic area, and adjusts the estimated Notre Dame alumni earnings and the resulting wage premium accordingly.

TABLE B.20 – ESTIMATED ALUMNI EARNINGS BY DEGREE AND LOCATION

Category	Total	South Bend	Rest of St. Joseph County	2 County Region	Rest of Indiana
Earnings Premium					
Median Earnings – Notre Dame Grads (10 Yr)	$71,600				
Median Earnings – National Bachelors +	$57,446				
Notre Dame Earnings Premium – Bachelors	24.64%				
Est. Premium Discount – Advanced	-50%				
Notre Dame Earnings Premium – Advanced	12.32%				
Median Earnings					
Associate's Degree		$26,242	$31,462	$32,635	$33,826
Bachelor's Degree		$36,169	$45,330	$40,507	$48,686
Bachelor's Degree - Notre Dame	*24.64%*	$45,081	$56,499	$50,487	$60,681
Advanced Degree		$49,462	$62,089	$53,359	$63,624
Advanced Degree - Notre Dame	*12.32%*	$55,556	$69,738	$59,933	$71,462

Source: American Community Survey Five-Year Estimates (2012-16), College Scorecard Database (2017), Econsult Solutions

Importantly, the gains to the regional economy from the wage premium conferred by a selective institution like Notre Dame are not necessarily equivalent to the gains that individual students might experience. In general, it is difficult to disentangle the extent to which earnings gains are driven by an institution attracting talented students (who might achieve some or all of that premium at an alternative institution) from the "value-add" that the institution itself provides to alumni earnings relative to its peers.

From the perspective of the regional economy, both gains attributable to retaining and attracting talented students to the region and gains from the "value-add" provided by the institution contribute to higher

[32] To enhance the accuracy of the calculation in terms of differentiating various geographic levels, workers within the subsumed geographies are netted out of each successive calculation in estimating annual premiums and ultimately aggregate earnings. For example, the "2-County Region" calculation relies on earnings and alumni location data for the two remaining counties (Marshall and Elkhart) other than St. Joseph County that comprise the region. As shown in the Table B.20, median wages vary for each successive geography. Calculations undertaken by successive geography are then aggregated in the final table in this section to produce a total premium for each geography, inclusive of the smaller geographies within it.

productivity and earnings for regional workers. Therefore, no precise allocation of "credit" between institutions and students is required to assess the household earnings impact. However, it is important for the analysis to recognize that alumni earnings are not purely additive to the regional economy, since alternative potential employees exist for any particular job within a given geography.

In keeping with the "gross impact" modeling approach utilized throughout this report, this analysis assumes that the overall level of employment within each geography of interest is fixed with or without the presence of Notre Dame.[33] The impact accruing to the economy is therefore not the full salary earned by Notre Dame alumni, but the incremental portion of that salary attributable to a) the level of their degree and b) the "value-add" for that degree level conferred by Notre Dame. This approach in effect assumes that the absence of Notre Dame would result in a substantial loss in the educational attainment level, and accordingly the productivity, of the regional workforce. In order to absorb this loss (while maintaining a fixed employment level) jobs held by Notre Dame alumni are assumed to "filter down" to workers with a lower education level, with jobs held by alumni with bachelor's degrees absorbed by workers with associate's degrees, and jobs held by alumni with advanced degrees absorbed by workers with bachelor's degrees.[34]

This framework is implemented by comparing estimated earnings for Notre Dame graduates by geography and degree level (as calculated in Table B.X) to average earnings by geography for workers of one lower degree level. Estimated earnings for Notre Dame bachelor's degree holders in each geography are therefore compared to associate's degree earnings in the same geographies to calculate a wage premium for a Notre Dame bachelor's degree, and estimated earnings for Notre Dame advanced degree holders within each geography are compared to average earnings for bachelor's degree holders to calculate a wage premium for a Notre Dame advanced degree (see Table B.21).

[33] See Appendix A for more discussion of the distinction between "gross" and "net" modeling approaches, and the challenges in defining a counterfactual scenario for modeling economic impact. In this context, a net analysis would imply estimating an alternative growth path for the size and composition of the regional economy and workforce absent the presence of Notre Dame since the founding of the institution, an exercise well beyond the scope and precision possible in this study.

[34] Note that the "filtering" process many in practice involve a long sequence of steps. For example, a highly skilled position held by an alumnus with an advanced degree is first replaced with a slightly less skilled advanced degree holder, whose position is then replaced by a slightly less skilled advanced degree holder, until a worker with a bachelor's degree ultimately fills a position currently held by a worker with an advanced degree. This sequential process is mathematically equivalent to, and more easily conceptualized as, the replacement of one advanced degree worker with one bachelor's degree worker, and so on. This process is also made possible by the open enrollment practices of many community colleges or non-selective four-year institutions, which suggest that the supply of these workers is likely relatively unconstrained.

TABLE B.21 – ESTIMATED NOTRE DAME WAGE PREMIUM BY GEOGRAPHY

Category	Degree Level	South Bend	Rest of St. Joseph County	2 County Region	Rest of Indiana
Notre Dame Bachelor's Degree					
Without Notre Dame	Associates	$26,242	$31,462	$32,635	$33,826
With Notre Dame	Bachelor's	$45,081	$56,499	$50,487	$60,681
Wage Premium – Bachelor's		**$18,839**	**$25,037**	**$17,853**	**$26,856**
Notre Dame Advanced Degree					
Without Notre Dame	Bachelor's	$36,169	$45,330	$40,507	$48,686
With Notre Dame	Advanced	$55,556	$69,738	$59,933	$71,462
Wage Premium – Advanced		**$19,387**	**$24,408**	**$19,426**	**$22,776**

Source: Econsult Solutions

AGGREGATE EARNINGS FROM NOTRE DAME WAGE PREMIUM BY GEOGRAPHY

The aggregate alumni earnings impact from the alumni wage premium in each geography can be derived by combining the estimated volume of alumni in the workforce in each geography with the estimated per alumni premiums. Calculations are undertaken first for alumni in South Bend, and then are applied in sequence for each larger geography, net of alumni in the smaller geographies. These results are then summed to represent the total impact in the larger geography (see Table B.22).[35]

[35] For example, the calculation for St. Joseph County precedes the calculation for the three-county region. To enhance the accuracy of the calculation, the calculation for the two-county region is undertaken using only data (both on the volume of alumni and on earnings) from Marshall and Elkhart counties only, yielding a result specific to those counties. This result is then summed with St. Joseph County estimates to yield a three-county result. The same approach is then used to estimate the wage premium for the remainder of Indiana, which is summed with the three-county result to yield the statewide estimate.

TABLE B.22 – ESTIMATED NOTRE DAME WAGE PREMIUM BY GEOGRAPHY

Category	South Bend	St. Joseph County	Three County Region	Indiana
Alumni in the Workforce				
Bachelor's Alums in Workforce (#)	1,804	2,699	2,876	5,708
Advanced Alums in Workforce (#)	427	687	781	1,480
Alumni in the Workforce (net smaller geographies)				
Bachelor's Alums in Workforce (#)	1,804	896	176	2,832
Advanced Alums in Workforce (#)	427	260	94	699
Wage Premium per Working Alum				
Bachelor's Degree	$18,839	25,037	17,853	26,856
Advanced Degree	$19,387	24,408	19,426	22,776
Total Premium (net smaller geographies)				
Bachelor's Degree ($M)	$33.98	$22.43	$3.15	$76.07
Advanced Degree ($M)	$8.28	$6.34	$1.83	$15.92
Combined Premium	**$42 million**	**$29 million**	**$5 million**	**$92 million**
Total Premium (with smaller geographies)				
Bachelor's Degree ($M)	$33.98	$56.40	$59.55	$135.62
Advanced Degree ($M)	$8.28	$14.62	$16.45	$32.38
Combined Premium	**$42 million**	**$71 million**	**$76 million**	**$168 million**

Source: Econsult Solutions. Rows and columns may not sum due to rounding

Importantly, while the alumni who achieve these additional earnings are spread across graduation classes from several decades, the earnings premium is a "snapshot in time" that captures incremental earnings for a given year. This premium will be repeated in subsequent years (modified for an additional class of graduates, alumni dropping out of the workforce, changes in earning power, etc.). This annualized impact can therefore be aggregated with the other impact categories capture in this report.

The increase in household earnings is translated into household spending in order to model its impact on the economy within each geography. As described in Section 5, this process deducts a portion of earnings that do not result in additional spending (such as taxes, savings, etc.) and then estimates the total impacts of the remaining incremental household spending on economic output, employment, and wages.

APPENDIX C – ECONOMIC AND FISCAL IMPACT MODELS

Economic impact estimates are generated by estimating the initial amount of direct activity occurring within each geography of interest (as detailed in Appendix B), and then using input-output models to translate this direct economic activity into the total amount of economic activity that it supports. Expenditures within a given geography give rise to "spillover" impacts when those dollars are recirculated to suppliers and to employees within the local and state economy. In so doing, they also support additional employment and earnings, and generate tax revenue for local governments and for the State of Indiana.

ESI has constructed an input-output model of the regional and state economy using IMPLAN software to estimate the total impact of these expenditures. The detail that follows explains briefly the theory behind input-output modeling, the mechanics of utilizing it to estimate economic and employment impacts, and then fiscal model utilized to estimate tax revenue impacts to local and state government from Notre Dame's economic activity.

C.1 INPUT-OUTPUT MODELING

OVERVIEW

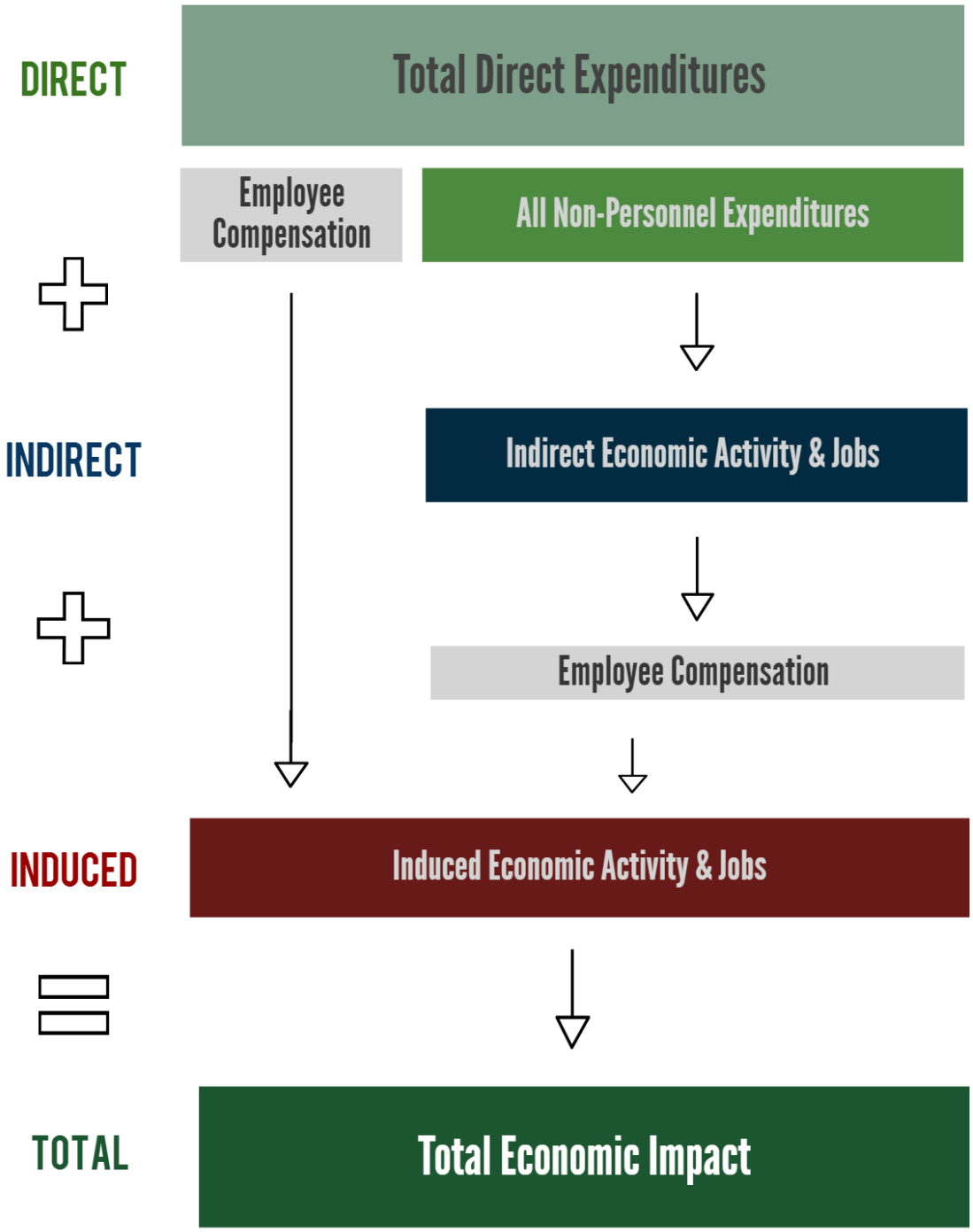
Economic impact estimates for annualized capital and operating activity are generated by utilizing input-output models to translate an initial amount of direct economic activity into the total amount of economic activity that it supports, which includes multiple waves of spillover impacts generated by spending on goods and services and by spending of labor income by employees. In an inter-connected economy, every dollar spent generates two spillover impacts:

- First, some amount of the proportion of that expenditure that goes to the purchase of goods and services gets circulated back into an economy when those goods and services are purchased from local vendors. This represents what is called the "indirect effect," and reflects the fact that local purchases of goods and services support local vendors, who in turn require additional purchasing with their own set of vendors.

- Second, some amount of the proportion of that expenditure that goes to labor income gets circulated back into an economy when those employees spend some of their earnings on various goods and services. This represents what is called the "induced effect," and reflects the fact that some of those goods and services will be purchased from local vendors, further stimulating a local economy.

The role of input-output models is to determine the linkages across industries in order to model out the magnitude and composition of the spillover impacts to all industries of a dollar spent in any one industry. Thus, Notre Dame's total economic impact is the sum of its own direct economic footprint, plus the indirect and induced effects generated by that direct footprint.

Figure C.1 – Economic Impact Methodology



Source: Econsult Solutions (2018)

INPUT-OUTPUT MECHANICS

To model the impacts resulting from the direct expenditures ESI developed a customized economic impact model using the IMPLAN input/output modeling system. IMPLAN represents an industry standard approach to assess the economic and job creation impacts of economic development projects, the creation of new businesses, and public policy changes within a county its surrounding area

IMPLAN has developed a social accounting matrix (SAM) that accounts for the flow of commodities through economics. From this matrix, IMPLAN also determines the regional purchase coefficient (RPC), the proportion of local supply that satisfies local demand. These values not only establish the types of goods and services supported by an industry or institution, but also the level in which they are acquired locally. This assessment determines the multiplier basis for the local and regional models created in the IMPLAN modeling system. IMPLAN takes the multipliers and divides them into 536 industry categories in accordance to the North American Industrial Classification System (NAICS) codes.

The IMPLAN modeling system also allows for customization of its inputs which alters multiplier outputs. Where necessary, certain institutions may have different levels of demand for commodities. When this occurs, an "analysis-by-parts" (ABP) approach is taken. This allows the user to model the impacts of direct economic activity related to and institution or industry with greater accuracy. Where inputs are unknown, IMPLAN is able to estimate other inputs based on the level of employment, earnings, or output by an industry or institution.

C.3 TAX REVENUE IMPACTS

The direct, indirect and induced economic output from Notre Dame's activity produce increases in various tax bases, which in turn lead to increased tax revenue collections for local governments and for the state. While IMPLAN produces estimates of these tax revenue amounts, ESI's does not utilize these results directly. Instead, we utilize a custom fiscal model that relies on the known relationships between various types of economic activity and tax collections (i.e. effective tax rates) to translate the increases in activity estimates by IMPLAN into attendant tax revenue results for the City of South Bend and State of Indiana.

APPENDIX D – ABOUT ECONSULT SOLUTIONS, INC. (ESI)

This report was produced by Econsult Solutions, Inc. ("ESI"). ESI is a Philadelphia-based economic consulting firm that provides businesses and public policy makers with economic consulting services in urban economics, real estate economics, transportation, public infrastructure, development, public policy and finance, community and neighborhood development, planning, as well as expert witness services for litigation support. Its principals are nationally recognized experts in urban development, real estate, government and public policy, planning, transportation, non-profit management, business strategy and administration, as well as litigation and commercial damages. Staff members have outstanding professional and academic credentials, including active positions at the university level, wide experience at the highest levels of the public policy process and extensive consulting experience.

ESI is an experienced provider of economic and fiscal impact studies for institutions of higher education. Recognizing that the economic impact from these institutions arises not only from their direct expenditures but also from their impact on the local knowledge base, workforce, and community, ESI has developed and applied a rigorous methodology to a wide range of educational institutions and groups. ESI's higher education clients include:

- Private research universities (such as the University of Pennsylvania, Emory University and Carnegie Mellon University);
- State-funded universities (such as the University of Connecticut, Rutgers University and the University of Delaware);
- Regional and community-serving institutions (such as Saint Joseph's University, Widener University and the Community College of Philadelphia),
- Consortia of universities (such as those in the Washington DC and Philadelphia regions), and more.