Economic Impact of the University of Wisconsin-Madison Athletics Department

June 10, 2019
Submitted to University of Wisconsin-Madison Athletics Department

ECONSULT SOLUTIONS INC.
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Executive Summary

University of Wisconsin-Madison Athletics (UW Athletics) is a Division I athletics organization that hosts 23 different sports teams known as the Wisconsin Badgers. UW Athletics prides itself on providing an elite college experience that develops student-athletes both on and off the field. In addition to supporting its student-athletes, UW Athletics serves as an economic engine for the City of Madison and the State of Wisconsin, generating substantial economic impact and tax revenues through its operational footprint and by attracting nearly two million visitors to its campus for events each year.



	Wisconsin	Madison
TOTAL ANNUAL ECONOMIC IMPACT	$610 million	$395 million
	4,480 jobs	2,950 jobs
TAX REVENUE IMPACT	$12 million	$1.7 million



1.8 million
visitors to Madison each year

$16 million
total economic impact on the Wisconsin economy for each home football game

$203 million
aggregate visitor spending brought into Wisconsin

$13.5 million
UW Athletics contribution to $87.5 million capital project—The "Nick" Recreation Center



Never lose sight of what your main goal is and that is working with young people. [Helping them] not only become good student-athletes, but good leaders and good citizens and being involved in giving back to the community.
—Barry Alvarez, Director of Athletics

Reputational Enhancement

UW Athletics prominently elevates the profile of UW and the entire state of Wisconsin at a national level. High-profile coverage and particularly national championships produce a halo effect for the reputation of UW and the state. They also increase awareness, student applications, and alumni giving, which help UW climb in national rankings and fulfill its institutional mission.

Advertising agreements worth an estimated trade value of
$1 million each year.

Social Cohesion

UW Athletics represents an intense shared allegiance for students and alumni. Whether the experience of that affiliation is in Madison or anywhere else in the world, it knits the global Badger community together. This social cohesion can have profound implications for forging social, civic, business, and cultural connections.

The Wisconsin Alumni Association has chapters in more than
75 cities worldwide.

Fundraising Catalyst

UW Athletics often serves as an entry point for alumni and other boosters to support UW through charitable contributions. It also provides multiple points of engagement for current and prospective donors, further strengthening UW's donor base and financial position.

13,596 donors contributed
$40.2 million
to UW Athletics in 2018.

A Commitment to Service

UW Athletics is deeply committed to instilling in its student-athletes an ethos of service. This is reflected in the many service projects and engagement opportunities teams participate in, as well as the lifelong lessons UW student-athletes carry into their professional lives.

644 Student-Athletes
participating in 361 service events.

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About Econsult Solutions, Inc.

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.

1. Introduction

1.1 Report Purpose

The purpose of this study is to estimate the economic impact the University of Wisconsin-Madison Division of Intercollegiate Athletics (UW Athletics) has on the city of Madison and the state of Wisconsin. The University of Wisconsin (UW) is a public, four-year institution of higher education with a 936-acre campus, founded in 1848 and boasting more than 40,000 students and 22,000 faculty and staff. UW's Athletics Department is world-renowned—an NCAA Division I organization and a member of the Big Ten Conference.

Because of the size and scale of its teaching and research activities, the University is an important economic engine for the city of Madison and the state of Wisconsin. Similarly, UW Athletics generates a substantial impact for the city and state. This report will articulate impact in terms of economic output, jobs created, and tax revenues generated from UW Athletics' annual operations and large scale capital projects, as well as from the visitors that come to campus to enjoy a Badger game or other UW Athletics events. UW Athletics also draws economic activity into the city and state through the sale of Badger-licensed merchandise and advertising at Badger events covered by local and national media. In addition to these impacts, there are broader societal impacts for which UW Athletics can take credit—including boosting the reputation of Madison and Wisconsin on the national stage, cultivating a stronger community within the UW-Madison alumni network, and strengthening the local community through service initiatives led by Badger student-athletes and staff.



In all of these ways, UW Athletics delivers a substantial return on investment in the form of economic activity, jobs, and tax revenues generated within the local and state economy. It is also a flagship brand, ambassador, and community service provider within the state it represents both on and off the field.

1.2 About UW Athletics

UW Athletics is a Division I athletics organization that hosts 23 different sports teams known as the Wisconsin Badgers. The Department prides itself on providing its elite student-athletes with a transformative experience that develops them both on and off the field.

"The Division of Intercollegiate Athletics at the University of Wisconsin-Madison provides student-athletes with opportunities to excel, and thereby advance their athletic, academic, and social development. In doing so, we endeavor to field competitive teams that display growth, integrity and accountability."
-UW-Madison Athletics Mission Statement

UW Athletics has been led by Barry Alvarez, the Director of Athletics, for 16 years. During his tenure, the Badgers have won 62 conference championships across 14 programs and 15 national championships across six different programs (see Table 1.1). In addition, 19 Badger student-athletes have been crowned individual national champions (see Table 1.2). In the 2017-2018 academic year, the Badgers boasted successful seasons across many of their sports, with 18 of 23 teams competing in the postseason.

Table 1.1 – National Championship Teams During Athletic Director Alvarez's Tenure

Year	Sport
2003-04	Women's Lightweight Rowing
2004-05	Women's Lightweight Rowing
2005-06	Men's Cross Country Men's Hockey Women's Hockey Women's Lightweight Rowing
2006-07	Women's Hockey Men's Track & Field
2007-08	Women's Lightweight Rowing Men's Rowing
2008-09	Women's Hockey Women's Lightweight Rowing
2010-11	Women's Hockey
2011-12	Men's Cross Country
2018-19	Women's Hockey

Source: UW-Madison Athletics (2019)

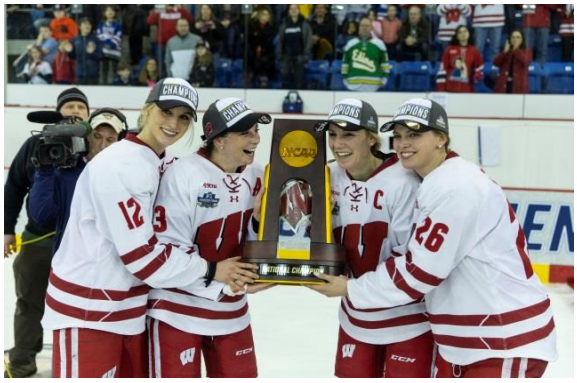




Table 1.2 – Individual National Champions During Athletic Director Alvarez's Tenure

Year	Individual	Sport
2004-05	Simon Bairu	Men's Cross Country
	Chris Solinsky	Indoor 3,000 Meters
2005-06	Simon Bairu	Men's Cross Country
	Chris Solinsky	Indoor 3,000 Meters + Outdoor 5,000 Meters
2006-07	Chris Solinsky	Indoor 3,000 Meters + Outdoor 5,000 Meters
2009-10	Andrew Howe	165 lbs., Wrestling
2010-11	Maggie Meyer	200-Yard Backstroke, Swimming
2012-13	Drew teDuits	200-Yard Backstroke, Swimming
2013-14	Michael Lihrman	Indoor Weight Throw
2015-16	Zach Ziemek	Heptathlon
	Kelsey Card	Discus
2018-19	Alicia Monson	Indoor 5,000 Meters
	Morgan McDonald	Men's Cross Country, Indoor 3,000 Meters, Indoor 5,000 Meters
	Beata Nelson	100-Yard Backstroke, 200-Yard Backstroke, 200-Yard IM, Swimming

Source: UW-Madison Athletics (2019)

UW Athletics presently has more than 800 student-athletes and nearly 400 full-time staff, and it hosts more than 1.8 million spectators each year, making the department a substantial component of the UW experience and a major driver of visitation to the region. In addition to hosting home games in its facilities, UW Athletics hosts a wide range of conferences, banquets, alumni activities, concerts, commencements, tournaments, and camps that bring even more visitors to campus and increase the visibility of the University of Wisconsin and the city of Madison throughout the region and beyond. Under Director Alvarez's leadership, local engagement and community service have been emphasized.

In 2012, UW Athletics created the Badgers Give Back program, a community relations platform meant to enhance student-athlete outreach efforts. Badgers Give Back has become a staple of the student-athlete experience at UW with two-thirds of student-athletes participating.



"Why Wisconsin? Why do fans have a connection to the Badgers and give us such tremendous support? Why do student-athletes choose to attend UW-Madison? Is it because of our athletic success? Is it because of our commitment to developing a complete student-athlete? Is it because of the beauty of campus and the vibrant city of Madison? We concluded that the answer is a resounding yes! It's all of those things and then some.
–Barry Alvarez, Director of Athletics

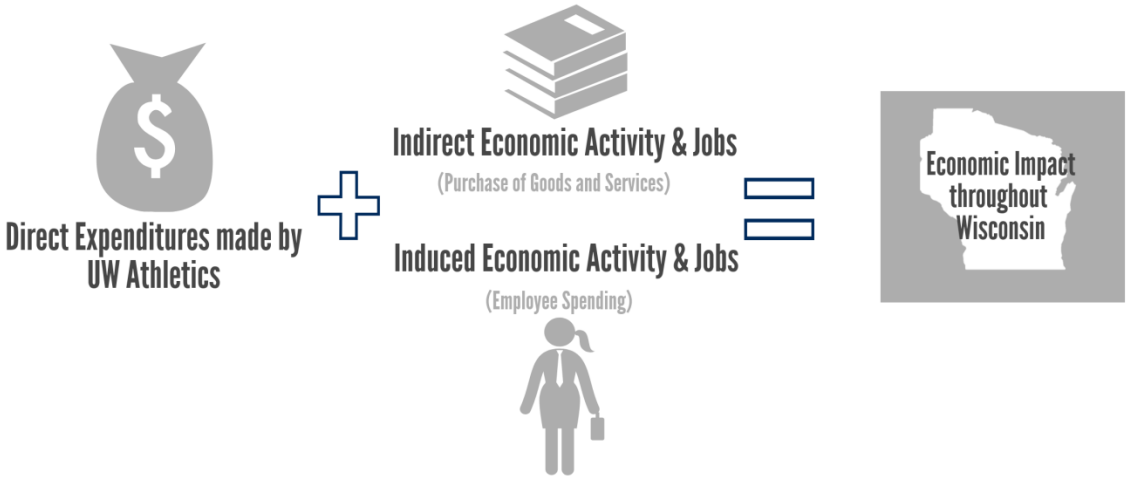
1.3 Economic and Fiscal Impact Modeling

Econsult Solutions, Inc. (ESI) employed industry-standard economic modeling techniques to estimate the direct economic activity generated by the Athletics Department of the University of Wisconsin-Madison, and to translate that activity into total economic output, employment, and earnings, as well as tax revenue impact.

Economic impacts are the sum of direct activity attributable to UW-Madison Athletics (either direct spending by UW Athletics on operations and capital activity or spending drawn into the area by students and visitor, and the spillover impacts of that direct activity) (see Figure 1.1). 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 impacts"). ESI used IMPLAN modeling software to estimate indirect and induced impacts, and sums them with the direct activity to produce total economic impact. IMPLAN also estimates the number of jobs that are supported by the spillover impacts (indirect and induced impacts). For ease of comprehension, ESI converts these jobs into Full-Time Equivalent (FTE) jobs, and all jobs expressed in this report are FTE jobs.

ESI also created a custom fiscal impact model to translate economic impacts into their commensurate effect on local and state tax bases, in order to develop estimates of local and state tax revenues generated by UW Athletics. See Appendix B for additional details on ESI's economic and fiscal impact model methodology.

Figure 1.1 – Economic Impact Methodology



Source: Econsult Solutions, Inc. (2019)

1.4 Geographies of Interest

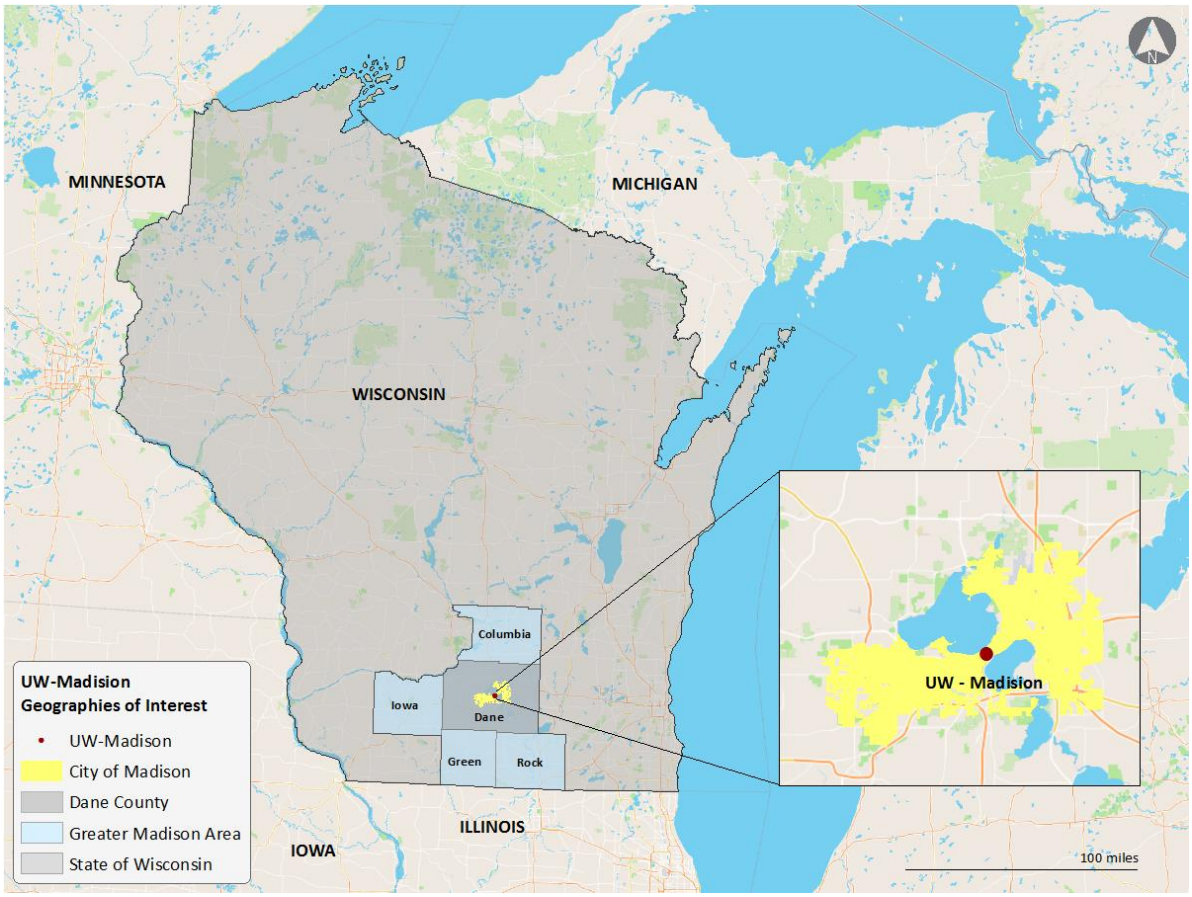
Because UW Athletics' impact is felt at various geographic levels, the report calculates economic impacts for the following geographies (see Figure 1.2):

- The city of Madison
- Dane County
- Greater Madison Area: Dane County, Columbia County, Iowa County, Green County, and Rock County
- The state of Wisconsin

The impact of UW Athletics will be greatest at the state level since that geography is inclusive of all the impacts at a city, county, and region level.

While much of UW Athletics' activity is tax-exempt because of the not-for-profit status of the institution, the economic impact it generates every year produces considerable tax revenue generation for the State of Wisconsin government and to a lesser extent the City of Madison government. Therefore, tax revenue generation from all economic impact categories is modeled for the State, and where applicable also for the City. Other jurisdictions, such as surrounding cities and towns as well as neighboring states, likely also benefit from tax revenues generated by UW Athletics activities, but these amounts are smaller and they are not evaluated in this report.

Figure 1.2 – Geographies of interest



Source: ArcGIS (2019), Mapbox (2019), Econsult Solutions, Inc. (2019)

1.5 UW-Madison Athletics as a Regional Economic Engine

Athletics is an important part of the identity of and experience at the University of Wisconsin. It is also a significant driver of economic activity in the city of Madison and the state of Wisconsin, with important implications for the local employment base, numerous regional industry sectors, and local and state tax revenue levels. This is because Athletics represents a unique set of activities that take place locally but are enjoyed by a population of participants and spectators that come from all over the country. Sporting events and related activities draw people and dollars from outside the region, in the form of out-of-town teams and fans, alumni and corporate donations, purchase of licensed merchandise, and media buys. They are also a platform by which the University as a whole, and by extension the state of Wisconsin, enhances its reputation to the rest of the world. And they are part of the value conferred upon students who attend the University of Wisconsin, whose shared experience in rooting for the school stays with them long after they leave the University. This experience creates lifelong connections that facilitate their social and professional advancements and increases the likelihood that alumni will remain connected to UW and to the state via return visits and charitable contributions.

Hence, it is useful to consider the range and scale of UW Athletics' economic contribution to the city of Madison and the state of Wisconsin, which is the focus of this report. The sections of this report are organized to highlight those economic and societal impacts:

- **Section 2: Impact from Direct Spending by UW Athletics.** Annual operating expenditures as well as major capital investments represent direct dollars spent by UW Athletics, which in turn have a multiplier effect at all geographic levels. The first content section of this report concerns itself with the economic and fiscal impacts from UW Athletics as a major employer, a significant procurer of a wide range of foods and services, and a major undertaker of large-scale capital projects.

- **Section 3: Impact from Participant/Attendee Ancillary Spending.** This section looks at impacts for spending beyond UW Athletics' own spending, from spectators and participants of various events. This section separately considers football games, games for all other sports, and all other Athletics-related events. ESI combined attendance and participant data with publicly available industry data to develop attendee and participant archetypes as well as spending profiles for each archetype. This yields an estimated ancillary spending amount that can be modeled in IMPLAN to arrive at economic impact estimates, from which ESI's tax revenue impact model can derive local and state tax revenue estimates.

- **Section 4: Impact from Additional Ancillary Spending.** Beyond the ancillary spending drawn to campus by UW Athletics events, UW Athletics can take credit for two additional forms of spending that also have a multiplier effect throughout the state economy. The first is the purchase of UW-licensed merchandise in locations besides campus or at times other than when attendees are on campus for an event. The second is media buys associated with UW Athletics events. These additional spending categories, which will be estimated in part using data from UW Athletics, represent additional spending that enriches the state economy and that therefore must be considered when taking into account the overall impact of UW Athletics.

- **Section 5: Broader Societal Impacts.** Beyond the above non-overlapping impact categories are a number of broader benefits that warrant exploration in an economic impact study of UW Athletics. The first is the reputational enhancement—to the University of Wisconsin, the state of Wisconsin, and to people affiliated with UW or the state—that comes from the success of UW teams. Championships drive economic activity (e.g. higher attendance and sale of merchandise), which is accounted for above, but they also increase interest in the University and state as a whole (as reflected in more applications and more fundraising for the University and more visitation and business activities for the state, for example). Secondly, UW Athletics represents a connecting force for students, staff, and alumni, both in the present and the future (as a common alma mater that can open doors and break the ice). This is important because this is the type of connective tissue – a common alma mater, shared team allegiances, and even shared rituals and vocabulary – that improves one's social experiences, strengthens professional

networks, and closes business deals. Third, UW Athletics is increasingly seen as a force for good at the local level, as players and staff alike spend time on a number of service initiatives that connect to and provide benefits for the local communities. In all such cases, direct calculations are not possible, but a brief literature review demonstrates these effects, produced by UW Athletics, on the strength and size of the state economy.

- **Section 6: Conclusion.** The concluding section of the report summarizes economic impacts and speaks to how they represent a return on the investment in UW Athletics. First, and particularly of interest for audiences representing the executive and legislative branches of State government, the conclusion summarizes economic impacts across sections and expresses them in aggregate terms as relative to investments made by the State. At a time of fiscal uncertainty, being able to connect State investments to the magnitude and diversity of impacts that are produced by them is paramount, and thus represents a fundamental outcome of this economic impact analysis that is stated clearly in the concluding section. Second, for local audiences, the conclusion speaks to how these positive impacts have immediate local benefit, and acknowledges the existence of costs borne at the local level (e.g. public safety and traffic/parking consequences) but concludes that they are outweighed by an overwhelming amount of local benefits.

2. Impact from Direct Spending

2.1 Section Overview

The Athletics Department of the University of Wisconsin-Madison is a major economic engine for the state of Wisconsin and the local Madison area. The funds that UW Athletics spends on hosting sports competitions, tournaments, and many other events have a multiplier effect that results in economic impact rippling through different geographic levels. This section uses information provided by UW Athletics on annual operating expenditures and major capital investments, and translates UW Athletics' footprint into its economic impact at a city, county, regional, and statewide level using standard input-output modeling techniques via IMPLAN. The section also describes tax revenue impacts that result from the economic impacts at the city and state level into the commensurate effect those impacts have on tax revenues to the City of Madison and the State of Wisconsin.

UW Athletics' operations and capital investments directly or indirectly support 1,700 jobs throughout the state of Wisconsin each year.

It is estimated that direct spending from UW Athletics annually produces $293 million in economic impact in the state of Wisconsin, supporting 1,590 jobs and $111 million in employee earnings.[1] UW Athletics' annualized average capital investments produce $20 million in economic impact in the state of Wisconsin, supporting 110 jobs and $6 million in employee earnings.

2.2 Direct Annual Operating Expenditures

Direct operations produce spillover effects at each geographic level, stimulating business activity and supporting employment across a variety of sectors. The total economic impact is the sum of the direct expenditures made by UW Athletics, the indirect impacts that result from institutional spending on goods and services with vendors within each geography, and the induced impacts that result when employees of UW Athletics spend their salaries and wages locally.



[1] Jobs are expressed in Full-Time Equivalent (FTE) jobs. All jobs expressed in this report are FTE jobs.

In aggregate, UW Athletics' total functional operating expenditures for FY 2018 are approximately $140.7 million.[2] This is a 21 percent increase from FY 2016. UW Athletics is a self-sustaining organization within UW, paying for its expenditures from a combination of ticket sales, concessions, conference distribution, multimedia and licensing revenues, and donor support.

To determine the magnitude of the economic impact of UW Athletics' operational activity, it is first necessary to understand the composition of annual expenditures within the local, regional, and state economies. Since economic impact relates largely to where expenditures occur, deductions are made for budgetary items that do not represent spending within a given geography. For example, this modeling approach excludes debt service paid by UW Athletics from the analysis because that expenditure does not represent an actual outlay of funds that is actively circulating within the local and state economies. After that adjustment, the modeled amount of direct spending within the economy is $129.6 million (see Table 2.1).

Table 2.1 – Summary of UW-Madison Athletics Operating Expenditures

Category	Included in Model	FY 2018 Amount ($M)	Modeled Amount ($M)
All Salaries & Fringe Benefits	Yes	$58.4	$58.4
Financial Aid	Yes	$11.5	$11.5
Operational Expenses	Yes	$46.1	$46.1
Post Season Participation	Yes	$3.8	$3.8
Transfers to Institution[3]	Yes	$9.8	$9.8
Debt Service	No	$11.2	$0.0
Total Expenses		**$140.7**	**$129.6**

Source: UW-Madison Athletics (2019)
Note: throughout report, columns may not sum due to rounding.

[2] The Department's annual budget also includes capital projects; those are described in the following subsection and analyzed separately because they behave differently than typical Athletics expenditures. Expenditures include transfers to the University from revenue generated by UW Athletics' Big Ten TV media share, licensing shares and parking revenues, and UW Athletics band travel expenses.
[3] This spending comes from revenue such as the Big Ten Network media share, licensing fees, and parking fees. ESI includes transfers to institution as an expenditure of Athletics in this model because these are real dollars flowing from the department to the University and results in real expenditures that UW spends on its educational mission.

2.3 Direct Annualized Capital Investments



Capital investments in UW Athletics' facilities represent another impact spending category. These investments represent one-time costs that support the organization's mission and goals. ESI analyzes capital spending by averaging recent past spending over the past few years in order to smooth for peaks and valleys in spending.

UW Athletics' average annualized capital investment over the past three years is $10.8 million (see Table 2.2). These project costs include renovations, state-of-good-repair expenses, equipment purchases, and the purchase and procurement of materials and services. These expenditures touch a wide range of manufacturers and professional service providers in addition to construction companies within the city and state.

Table 2.2 – Capital Investments made by UW Athletics by Year

Fiscal Year	Capital Expenses (in 2019$ M)[4]
FY 2017	$8.2
FY 2018	$11.7
FY 2019	$12.6
Total Capital Expenses	$32.5
Annualized Capital Impact	**$10.8**

Source: UW-Madison Athletics (2019), Econsult Solutions, Inc. (2019)

It is important to note that preceding this three-year period of capital investments UW Athletics experienced a greater amount of capital spending from the construction of new facilities such as the LaBahn Arena ($27.9 million project) in 2012 and the Stephen M. Bennett Student-Athlete Performance Center ($86 million project) in 2014. These activities are not captured in the analyses. Instead, the capital investments shown here are primarily for the upkeep and expansion of existing facilities, which helps to provide a better experience for fans and participants alike. For instance, due to the rising attendance for volleyball matches, the UW Fieldhouse increased its occupancy capacity from 6,012 to 7,052 by bringing six sections of the upper deck to code in the summer of 2018.

[4] Expenditures are inflated to 2019 dollars in order to calculate a three-year average for economic modeling purposes.



The Nicholas Recreation Center, or "The Nick," is the first major building project of UW-Madison's Master Plan. The Nick will represent the future of recreation and wellness at the University, replacing an aging recreational facility with a new and modernized recreational and wellness facility. UW Athletics is contributing $13.5 million to the $87.5 million building, which hosts the Badgers' Swimming and Diving teams.

While UW Athletics' capital investments decreased following the major construction of the new facilities built in 2012 and 2014, plans are under way for future capital projects in FY 2019 and beyond. The annual average in this report's calculations does not reflect these major future capital investments made by UW Athletics. Those future investments are a part of a major capital campaign that is planned which will support significant renovations to Camp Randall Stadium and the Kohl Center. This spending will represent substantial growth in capital expenditures compared to the current spending levels, which are primarily basic improvements and maintenance.

The completion of significant renovations to the Nicholas Recreation Center (funded in part by UW Athletics) as well as updating the facilities used by football, basketball, and hockey reflects ongoing investment in a variety of Badger teams. Further, UW Athletics' plans to continue to invest in its facilities demonstrate prudent stewardship of its resources in order to provide a better experience for fans and participants alike.

2.4 Economic Impact from Direct Spending

Direct operations and capital investments produce "spillover" effects at each geographic level, stimulating business activity and supporting employment across a variety of sectors. The total economic impact is the sum of the direct expenditures made by UW Athletics, the indirect impacts that result from spending on goods and services with vendors within each geography, and the induced impacts that result when employees spend their wages in local communities. Indirect and induced impacts grow at each successive geography, due to more purchasing and recirculation activity happening within the larger geography and due to a greater capture of downstream activity.

Table 2.3 shows the aggregate annual economic impact from UW Athletics within Madison, Dane County, the Greater Madison Area, and Wisconsin. In total, operational activities have a $293 million economic impact within the Wisconsin economy each year, of which 69 percent takes place within the Madison (city) economy. This economic impact supports 1,590 jobs throughout the state economy, 67 percent of which are located within the city of Madison.

Table 2.3 – Economic Impact from Annual Operations

Operating Impacts	Madison	Dane County	Madison Area	Wisconsin
Direct Output ($M)	$130	$130	$130	$130
Indirect & Induced Output ($M)	$74	$124	$126	$163
Total Output ($M)	**$203**	**$254**	**$255**	**$293**
Annual Employment Supported	1,070	1,370	1,370	1,590
Employee Compensation ($M)	$79	$94	$94	$111

Source: UW-Madison Athletics (2019), IMPLAN (2015), Econsult Solutions, Inc. (2019)

Table 2.4 shows the aggregate economic impact from annualized average capital investments made by the Athletics Department of UW-Madison. In total, capital investments has a $20 million economic impact within the Wisconsin economy each year. As noted in a previous section, due to the future major capital investments to athletics facilities, the annual economic impact of capital investments will likely increase significantly in future years.

Table 2.4 – Annualized Economic Impact from Capital Investments

Capital Impacts	Madison	Dane County	Madison Area	Wisconsin
Direct Output ($M)	$11	$11	$11	$11
Indirect & Induced Output ($M)	$3	$8	$8	$9
Total Output ($M)	**$14**	**$18**	**$19**	**$20**
Annual Employment Supported	80	110	110	110
Employee Compensation ($M)	$5	$6	$6	$6

Source: UW-Madison Athletics (2019), IMPLAN (2015), Econsult Solutions, Inc. (2019)

In the aggregate, the annual economic impact from operational activities and annualized capital investments produce a $313 million economic impact on the Wisconsin economy each year, of which nearly 70 percent is enjoyed within the Madison economy.

Table 2.5 – Aggregate Economic Impact from Operations and Capital Investments

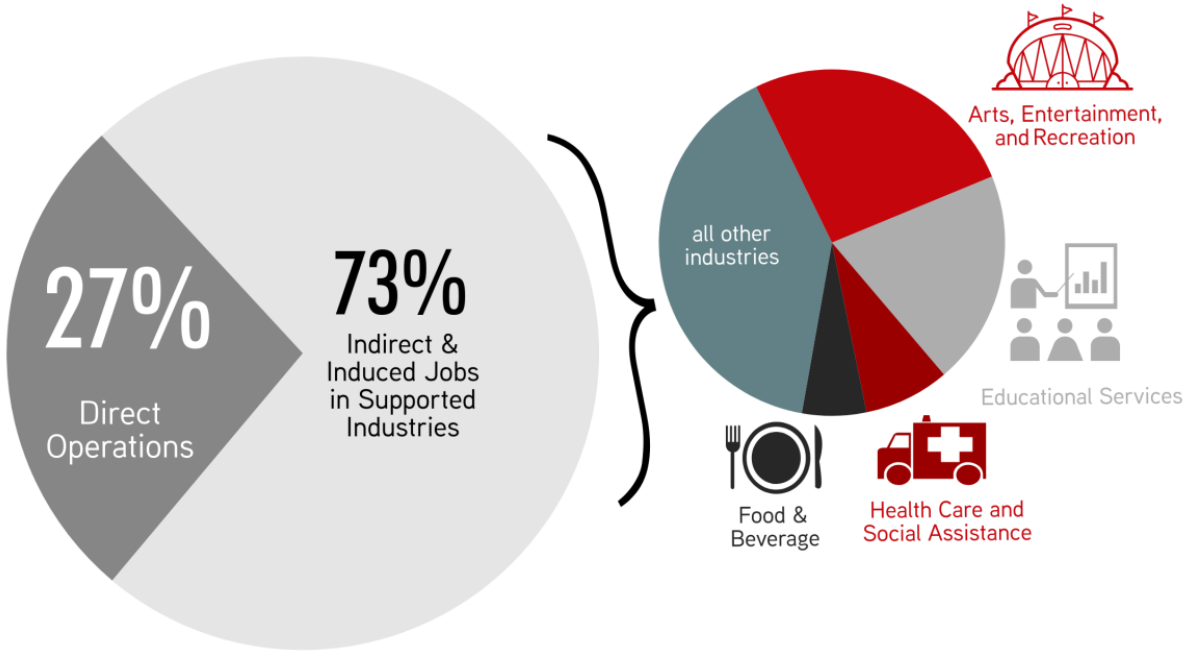
	Madison	Dane County	Madison Area	Wisconsin
Direct Output ($M)	$140	$140	$140	$140
Indirect & Induced Output ($M)	$77	$132	$133	$172
Total Output ($M)	**$218**	**$272**	**$274**	**$313**
Annual Employment Supported	1,150	1,480	1,480	1,700
Employee Compensation ($M)	$84	$99	$100	$117

Source: UW-Madison Athletics (2019), IMPLAN (2015), Econsult Solutions, Inc. (2019)

2.5 Industry Distribution of Economic Impact from Direct Spending

While the activity of the Athletics Department of UW-Madison exclusively focuses on athletics, the economic impact of that activity supports additional economic activity beyond this sector. More than 70 percent of the jobs generated by UW Athletics' operational impact are in industries supported by procurement of various goods and services or by the income earned by employees who then spend those earnings into the local and state economies. These supported industries include arts, entertainment, and recreation (26 percent of the indirect and induced impact); educational services (20 percent); health care and social assistance (8 percent); and food and beverage services (6 percent) (see Figure 2.1).

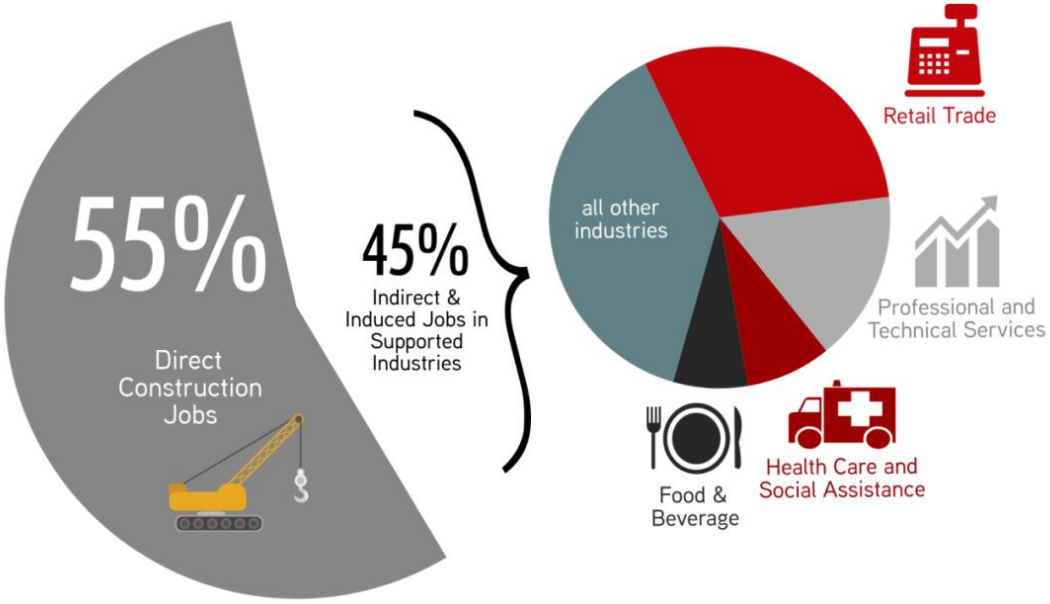
Figure 2.1 – Industry Distribution of Statewide Employment Impact from Annual Ongoing Operations



Source: IMPLAN (2015), Piktochart (2019), Econsult Solutions, Inc. (2019)

The economic impacts associated with UW Athletics annual capital investments result in continued economic activity for the construction sector, but the impacts spread beyond that as spending from construction, goods and services, and workers' salaries recirculate in the local economy. The annualized capital investments into UW Athletics facilities support about 110 jobs each year, inclusive of the indirect and induced impacts. Figure 2.2 shows the proportion of the total employment impact associated with capital investments that has accrued in and beyond the construction industry within Wisconsin. Approximately 45 percent of the employment supported by capital investments is in sectors outside of construction. Major industries supported include retail trade (23 percent of the indirect and induced impact), professional and technical services (12 percent), health care and social assistance (11 percent), and food and beverage services (9 percent).

Figure 2.2 – Industry Distribution of Statewide Employment Impact from Annual Capital Investments



Source: IMPLAN (2015), Piktochart (2019), Econsult Solutions, Inc. (2019)

2.6 Tax Revenue Impact from Direct Spending

Although UW Athletics is a not-for-profit entity, the fiscal impacts generated by its activity are substantial. University of Wisconsin-Madison is a mission-driven institution, which seeks to foster an enrichening learning environment and maintain a level of excellence and standards in all programs. UW Athletics, as part of this mission-driven institution, echoes these values. UW Athletics provides student-athletes with opportunities to excel, which advances their athletic, academic, and social development. While it is a not-for-profit institution and does not pay taxes, UW's operations and capital investments generate tax revenues for the State government. These operating and capital outlays increase the State of Wisconsin's tax bases directly by employing staff which generates taxable income, and indirectly via spending by vendors and employees. The same is true for UW Athletics. It is estimated that impacts from **UW Athletics operations generate about $5.3 million in personal income and business income tax revenue for the State of Wisconsin each year; an additional $400,000 in annual State tax revenues is generated from UW Athletics' capital expenses (see Table 2.6).**

Table 2.6 – Estimated Annual Tax Revenue Impact from UW Athletics Operations and Capital Expenses to the State of Wisconsin

Tax Type	Operations	Capital Expenses	Total
Income ($M)	$3.9	$0.2	$4.1
Sales ($M)	$1.2	$0.2	$1.4
Business ($M)	$0.2	$0.0	$0.2
Total	**$5.3**	**$0.4**	**$5.7**

Source: Wisconsin CAFR (2017), Econsult Solutions, Inc. (2019)

3. Impact from Participant/Attendee Spending

3.1 Section Overview

Each year, the University of Wisconsin-Madison hosts numerous athletic events which attract both local and outside visitors. During the 2017-2018 academic year, the University hosted 180 athletic events with an attendance of approximately 1,328,000. The University also hosts many athletic events that are not affiliated with any of the University's athletics teams. Over 50 external athletic events were hosted that year with an estimated attendance total of 276,000; and over 200,000 visitors came to sports camps, concerts, and other events hosted at UW Athletics facilities. These visitors who come to UW-Madison to enjoy these events also make a significant economic impact on the local community as they shop, dine, and stay in hotels near the campus and throughout the region.

$203 million

aggregate visitor spending brought into Wisconsin

This visitor spending has broader implications for the local, regional, and state economy, as visitors from outside the area serve as a net import to Madison and Wisconsin. Their spending generates subsequent indirect and induced impacts as stores, restaurants, hotels, and other businesses purchase goods and pay local residents.

In total, UW Athletics is responsible for drawing in 1.8 million visitors annually, and it is estimated that these visitors spend $203 million in the Wisconsin economy. This influx of spending generates an annual economic impact of $298 million within Wisconsin and supports about 2,800 jobs throughout the state.



Unlike the previous section, which covered direct spending by UW Athletics and was based on information provided by UW Athletics, these ancillary spending amounts are based on a combination of direct information from UW Athletics and assumptions anchored by research. Where possible, a conservative approach was taken to arrive at these estimates, in order to avoid overstating these amounts.

3.2 Modeling UW Athletics Visitor Activity

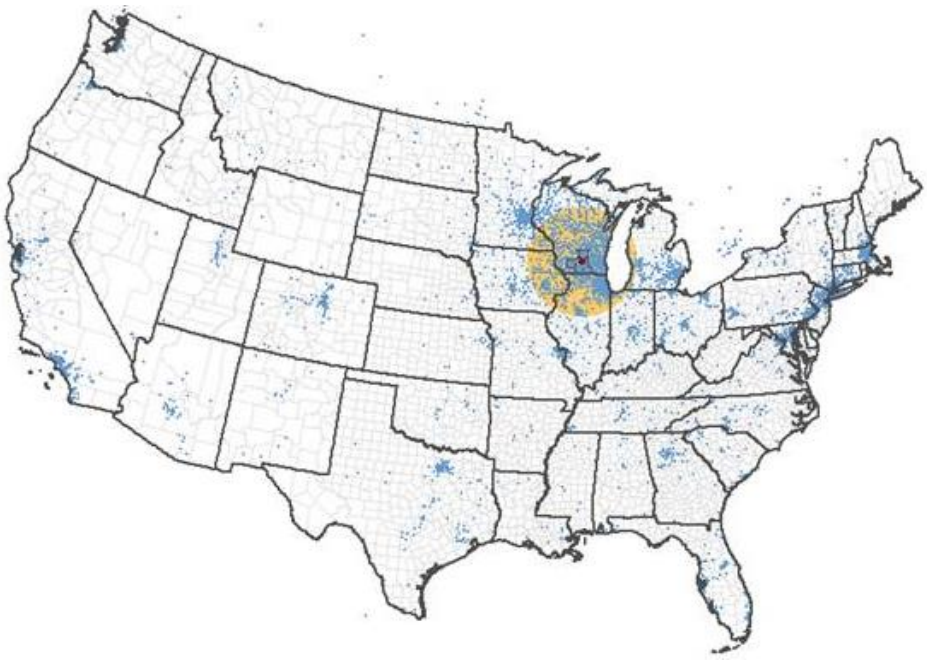
Throughout the academic year and over the summer, UW Athletics attracts thousands of visitors to its campus on any given day. These visitors come from all over the country and spend a significant amount of money within the local Madison economy each year, which supports employment and generates tax revenues for Madison and Wisconsin. Thousands of alumni, parents, student-athletes, and fans come to

campus for collegiate sporting events, athletic tournaments, UW-Madison's Commencement, and other events hosted at UW Athletics facilities.

12 percent of UW Athletics event attendees are coming from outside the region.

As a magnet for visitors, UW Athletics plays an important role in the larger tourism industry in the Madison area. In addition to major events like fall football weekends, basketball, and hockey games, UW Athletics' facilities host events that attract local, regional, and overnight visitors throughout the year. By attracting visitors year-round, Athletics supports demand for hotel rooms, retail, and dining, helping the industry maintain jobs through the year. In fact, UW Athletics, in conjunction with other annual, significant events within Madison, such as the World Dairy Expo and Ironman Triathlon, have been credited with growing demand for local hotel rooms in recent years.[5] The value of events and conferences to a region that draws outside spending cannot be overstated, as the activity represents new dollars into the local economy, and in this regard, UW Athletics plays a substantial role in attracting spending to the region.

Figure 3.1 – Geographic Distribution of UW Athletics Intercollegiate Sports Visitors



Source: UW-Madison Athletics (2019), Econsult Solutions, Inc. (2019)

To accurately estimate aggregate visitor spending, it was necessary to not only determine a credible estimate of visitors but also sort those visitors into different spending profiles, recognizing that not all visitors have the same economic footprint. Based on reason for visit and duration of trip, distance traveled, event type, and visitor age, unique spending pattern behaviors were created, and where possible, conservative assumptions were used.

[5] Abigail Becker, "Growth in number of Madison-area hotel rooms largest since 2008." *The Capital Times*, January 11, 2018.

UW Athletics provided the attendance figures for their events, which ESI then sorted into separate categories in order to develop visitor and spending estimates:



- *Football participants and attendees,* for which we estimate both a higher out-of-town proportion and a higher daily spending amount because football games coincide with the region's peak travel season (autumn) and are associated with higher hotel room rates and other expenditures.
- *Other UW Athletics Intercollegiate Sports participants and attendees*, which includes women's and men's basketball, women's and men's hockey, volleyball, and other major sporting events.
- *General Visitors* include attendees of non-collegiate sporting events or tournaments, UW-Madison Commencement, banquets, and other non-athletic events held at UW Athletics' facilities.

1.8 million

visitors to Madison each year



It is helpful to categorize visitors in this way in order to account for differences in travel and spending patterns within each group of attendees. Through conversations with UW Athletics, ESI was able to understand participants' spending patterns and developed three visitor spending profiles based on the visitor origin: 1) local, 2) regional/day trip, and 3) overnight. Spending profiles were established, using four major expenditure categories: 1) hotel/lodging, 2) food, 3) transportation, and 4) retail expenditures. Students/local attendees have the lowest spending amounts because they will not incur hotel or transportation expenditures; their food and retail expenditures are also smaller. Regional/day trip attendees will incur more transportation, food, and retail expenditures as they are traveling from a farther distance to the event. Overnight attendees, who are traveling from an even farther distance that warrants an overnight stay, will incur hotel/lodging expenses in addition to food, transportation, and retail expenditures.

In addition to the attendance figures provided by UW Athletics, attendance figures also include football tailgaters, members of the media, and visiting teams for athletics events, which we define as "participants." ESI excludes workers maintaining or managing the event, who are often accounted for in official attendance figures, since this impact is already accounted for in the previous section (direct operating activities). The participants' figures came from a combination of data that are publicly available on the number of visiting teams that come to UW, and data also provided by UW Athletics. Spending patterns are influenced by the distance traveled to Madison, and ESI applies the same methodology for both attendees and participants (see Appendix C for more detail on the methodology).

3.3 Impact from Football Participants/Attendees

Many attendees come from out of the region to watch UW's football team, which carries a national following and accounts for a plurality of total athletic event attendance. In addition to attendees, each team competing against UW-Madison brings with them their own fans, staff, and media. In total, there were over 580,000 participants and attendees of football games held at UW-Madison in the fall of 2017 season. As noted in Section 3.2, football has a higher spending profile due to its national following and due to peak travel times in Madison, in part because home football games create a heightened demand for lodging during this time and they occur at a time of peak travel to Madison. Out of town visitors for football stay the weekend and spend more on average than other sports' spectators. Spending profiles for football were created for students and local attendees, regional attendees, and overnight attendees (see Table 3.1 and the appendix).

According to national rankings from *USA Today*, Madison is frequently named the top college football town in the U.S. thanks to the Badgers.



Table 3.1 – Participants/Attendees for Home Football Games by Visitor Type, 2017 Season

Visitor Type	Spectators
Students and Local	184,200
Regional (Day Trip)	310,700
Overnight	90,000
Total	**584,900**

Source: UW-Madison Athletics (2019), Econsult Solutions, Inc. (2019)

Football's presence in annual bowls elevates the reputation of Wisconsin nationally, which encourages the fan base to further support the team and attend home games.

Based on our estimated spending profiles, aggregate ancillary spending by football games yields approximately $54 million in Madison, $66 million in Dane County, $73 million in the Greater Madison Area, and $78 million in Wisconsin each year. However, an adjustment is 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. Therefore, our modeling approach 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 $45 million of modelable activity within Madison, $55 million within Dane County, $62 million within the Greater Madison Area, and $66 million within Wisconsin (see Table 3.2).

Table 3.2 – Total Ancillary Spending for Home Football Games by Visitor Type and Geography ($M)

Visitor Type	Madison	Dane County	Madison Area	Wisconsin
Students and Local	$4	$5	$5	$6
Regional	$17	$19	$20	$21
Overnight	$33	$42	$48	$52
Total	**$54**	**$66**	**$73**	**$78**
Minus Non-Modeled Amount	($9)	($11)	($11)	($12)
Modeled Amount	**$45**	**$55**	**$62**	**$66**

Source: UW-Madison Athletics (2019), Econsult Solutions, Inc. (2019)

$16 million

total economic impact on the Wisconsin economy for each home football game



The influx of ancillary spending by students, participants, and attendees has a multiplier effect throughout the region, helping to support the tourism economy in Madison and Wisconsin. Table 3.3 shows the aggregate annual economic impact from ancillary spending due to home football games. This yields $67 million in economic impact within the Madison economy, supporting about 700 jobs within the city, and $114 million within the Wisconsin economy each year, supporting about 1,100 jobs within the state.

Table 3.3 – Annual Economic Impact from Ancillary Spending by Football Participants/Attendees

	Madison	Dane County	Madison Area	Wisconsin
Direct Output ($M)	$45	$55	$62	$66
Indirect & Induced Output ($M)	$22	$37	$40	$48
Total Output ($M)	**$67**	**$92**	**$102**	**$114**
Annual Employment Supported	690	900	990	1,080
Employee Compensation ($M)	$18	$25	$28	$31

Source: UW-Madison Athletics (2019), IMPLAN (2015), Econsult Solutions, Inc. (2019)

HOW DOES WISCONSIN BADGERS FOOTBALL BENEFIT THE LOCAL ECONOMY?

Every season, Wisconsin Badgers football games attract

585,000

visitors





Geographic Distribution of Ticket Holders

17% Students

66% from Wisconsin

17% from Out of State



$307

average nightly hotel rate

generating

$1.7 million

in hotel tax revenues for the City of Madison

In total, visitors spend a combined

$78.3 million

in the State of Wisconsin

35% lodging

30% food

7% transportation

29% retail

Football game visitors generate

$114 million

in economic impact per year within the state of Wisconsin



and support **1,080** jobs



with **64%** of jobs in the city of Madison

3.4 Impact from Participants/Attendees of Other UW Athletics Intercollegiate Sports

UW Athletics also boasts a number of other teams that draw in visitors to the region, such as basketball, hockey, and volleyball. While the impact of football is modeled separately from other UW Athletics events, UW has many other prominent sports programs with highly competitive teams that regularly win championships and have record-setting attendance each season. These athletic events draw in nearly 800,000 visitors to UW-Madison (see Table 3.4). Similar to football, these athletics events attract visitors to the region, drawing in new dollars to the local and state economies and generating additional economic activity.

In the 2017-18 season, the women's hockey team led the country in announced attendance, a 99.6 percent occupancy rate at the LaBahn Arena. Men's hockey ranked second in the country for home game attendance, with 10,000 fans on average per game. The team also led the Big Ten in home attendance with 198,000 spectators.



Table 3.4 – Participants and Attendees by Sport and by Visitor Type, 2017-18 Season

Sport (# of Home Games)	Students and Local	Regional (Day Trip)	Overnight
Men's Basketball (18)	138,700	180,000	21,000
Men's Hockey (19)	78,600	99,000	19,500
Women's Basketball (17)	21,300	25,500	12,400
Women's Hockey (17)	14,300	18,000	5,500
Volleyball (10)	23,900	32,600	3,900
Other Athletics[6]	32,900	42,000	9,300
Total	**309,700**	**397,100**	**71,600**

Source: UW-Madison Athletics (2019), Econsult Solutions, Inc. (2019)
Attendance figures are rounded

After adjusting for non-modelable amounts due to retail spending, aggregate ancillary spending by all other UW Athletics intercollegiate sports besides football yields $26 million of modelable spending within Madison, $30 million within Dane County, $32 million within the Greater Madison Area, and $34 million within Wisconsin (see Table 3.5).

[6] Other Athletics include sporting events such as cross country, golf, soccer, softball, tennis, and wrestling.

Table 3.5 – Ancillary Spending for Other UW Athletics Intercollegiate Sports by Visitor Type and Geography ($M)

Visitor Type	Madison	Dane County	Madison Area	Wisconsin
Regional Visitors	$21	$24	$26	$27
Overnight Visitors	$10	$13	$14	$15
Total	**$32**	**$37**	**$40**	**$42**
Minus Non-Modeled Amount	($6)	($8)	($8)	($8)
Modeled Amount	**$26**	**$30**	**$32**	**$34**

Source: UW-Madison Athletics (2019), Econsult Solutions, Inc. (2019)



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. This influx of ancillary spending by visitors of UW Athletics intercollegiate sports besides football has a multiplier effect throughout the region, generating annual economic impacts. Annually, ancillary spending generates $37 million within the Madison economy and $58 million within the Wisconsin economy.

Table 3.6 – Annual Economic Impact from Ancillary Spending by Participants/Attendees of Other UW Athletics Intercollegiate Sports

	Madison	Dane County	Madison Area	Wisconsin
Direct Output ($M)	$26	$30	$32	$34
Indirect & Induced Output ($M)	$11	$19	$21	$24
Total Output ($M)	**$37**	**$49**	**$53**	**$58**
Annual Employment Supported	410	500	540	580
Employee Compensation ($M)	$9	$13	$14	$16

Source: UW-Madison Athletics (2019), IMPLAN (2015), Econsult Solutions, Inc. (2019)

3.5 Impact from Other Events Hosted by UW Athletics

While a large proportion of ancillary spending comes from intercollegiate athletic events, UW Athletics regularly serves as a host to many visitors for various non-collegiate sports such as tournaments, sports camps, and other athletic events. UW Athletics' facilities also provide space for UW-Madison's Commencement, as well as other non-sporting events such as concerts, special events, banquets, and facility tours. Other UW Athletics events are estimated to draw in nearly 500,000 visitors annually (see Table 3.7).



Of particular importance, from an ancillary spending standpoint, are the many statewide conferences and tournaments hosted by UW Athletics. Thanks to UW Athletics' extensive facilities, annual conferences and tournaments are drawn to Madison each year such as the WIAA Boys State Basketball championships. These types of events span multiple days and draw in even more overnight attendees, attracting visitors from across the state and beyond, often spending money in the local economy on their trip.

Table 3.7 – Number of Visitors by Event and Visitor Type, 2017-18

Event Type	Students and Local	Regional (Day Trip)	Overnight
External Athletic Events	69,100	71,200	136,000
UW-Madison Commencement	15,900	15,900	31,800
Badger Sports Camps	3,300	6,700	3,300
Miscellaneous Events	79,600	35,900	15,900
Total	**167,900**	**129,700**	**187,000**

Source: UW-Madison Athletics (2019), Econsult Solutions, Inc. (2019)

destination madison™

Destination Madison, the city's tourism bureau, cites UW as a key reason to visit Madison—touting the Badgers' athletic achievements and spirit as a major draw.

After adjusting for non-modelable amounts due to retail spending, aggregate ancillary spending by other events hosted at UW Athletics yields $49 million of modelable spending within Madison, $61 million within Dane County, $68 million within the Greater Madison Area, and $74 million within Wisconsin (see Table 3.8).

Table 3.8 – Aggregate Ancillary Spending for Other Events Hosted by UW Athletics, by Visitor Type and Geography ($M)

Visitor Type	Madison	Dane County	Madison Area	Wisconsin
Regional Visitors	$7	$8	$8	$9
Overnight Visitors	$49	$61	$68	$74
Total	**$56**	**$69**	**$76**	**$82**
Minus Non-Modeled Amount	($6)	($8)	($8)	($9)
Modeled Amount	**$49**	**$61**	**$68**	**$74**

Source: UW-Madison Athletics (2019), Econsult Solutions, Inc. (2019)

The influx of ancillary spending by visitors and attendees of other hosted UW Athletics events has a multiplier effect throughout the region, helping to support the tourism economy in Madison and Wisconsin. Table 3.9 shows the aggregate annual economic impact from ancillary spending due to other events hosted at UW Athletics facilities besides UW Athletics intercollegiate events. This yields $73 million in economic impact within the Madison economy and $125 million within the Wisconsin economy each year.

Table 3.9 – Annual Economic Impact from Ancillary Spending by Participants/Attendees of Other Events Hosted by UW Athletics

	Madison	Dane County	Madison Area	Wisconsin
Direct Output ($M)	$49	$61	$68	$74
Indirect & Induced Output ($M)	$23	$40	$43	$52
Total Output ($M)	**$73**	**$101**	**$111**	**$125**
Annual Employment Supported	700	930	1,030	1,120
Employee Compensation ($M)	$20	$27	$30	$33

Source: UW-Madison Athletics (2019), IMPLAN (2015), Econsult Solutions, Inc. (2019)

3.6 Aggregate Economic Impact

Combined, ancillary spending generated by all UW Athletics intercollegiate events and non-athletic events hosted at UW Athletics facilities generates a sustained economic impact on the local and state economies. In total, more than 1.8 million attend or participate in an activity on the UW Athletics campus.

Table 3.10 – Total Visitors to UW Athletics by Visitor Category and Event Category (2017-2018)

	Students/Local	Regional (day trip)	Overnight	Total
Football	184,200	310,700	90,000	584,900
Other UW Athletics Events	309,700	397,100	71,600	778,400
Other UW Athletics Hosted Events	167,900	129,600	187,100	484,600
Total	**661,800**	**837,400**	**348,700**	**1,847,900**

Source: UW-Madison Athletics (2019)

Table 3.11 shows the aggregate annual economic impact from ancillary spending produced by these visitors. This yields $177 million in economic impact within the Madison economy and $298 million within the Wisconsin economy each year.

Table 3.11 – Annual Economic Impact from Ancillary Spending

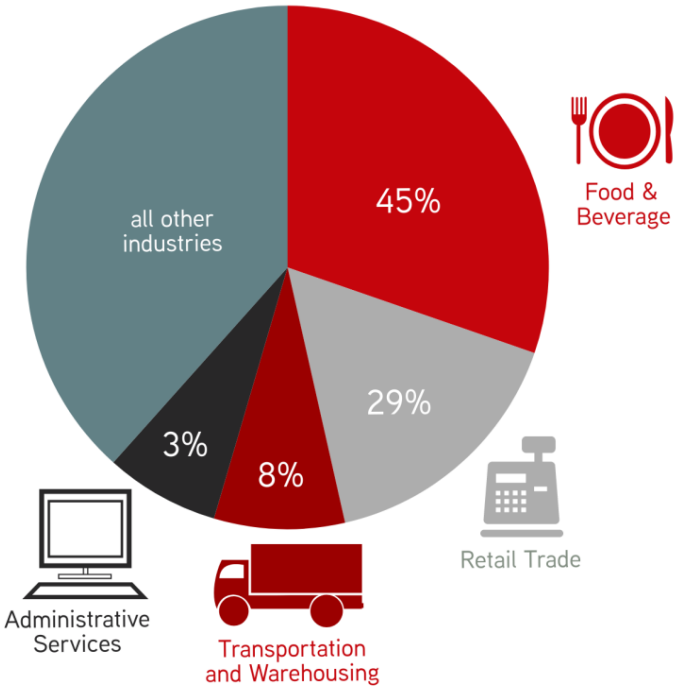
	Madison	Dane County	Madison Area	Wisconsin
Direct Output ($M)	$120	$146	$162	$174
Indirect & Induced Output ($M)	$57	$96	$104	$124
Total Output ($M)	**$177**	**$242**	**$266**	**$298**
Annual Employment Supported	1,800	2,330	2,560	2,780
Employee Compensation ($M)	$46	$66	$72	$80

Source: UW-Madison Athletics (2019), IMPLAN (2015), Econsult Solutions, Inc. (2019)

3.7 Industry Distribution of Economic Impact from Participant and Attendee Spending

Spending by participants and attendees directly impacts a number of industries, and in turn creates a multiplier effect that reaches additional industries. This influx of spending into Wisconsin supports jobs in a wide range of sectors statewide, particularly food and beverage services, retail, transportation and warehousing, and administrative services.

Figure 3.2 – Industry Distribution of Statewide Employment Impact Generated by Ancillary Spending



Source: IMPLAN (2015), Econsult Solutions, Inc. (2019)

3.8 Tax Revenue Impact from Participant/Attendee Spending

Student and visitor spending also boosts various local and state tax bases, creating tax revenues for various government justifications each year. It is estimated that the economic impact that results from UW Athletics student and visitor spending produces about $6 million in tax revenues for the State of Wisconsin each year. The City of Madison also issues a room tax on all hotel rooms and short-term rentals (fewer than 29 nights). Thus, overnight visitors drawn to Madison due to athletic and other events generate tax revenue from their hotel/lodging spending. This is estimated to be about $1.7 million each year (see Table 3.12).

Table 3.12 – Estimated Annual Tax Revenue Impact from UW Athletics Ancillary Spending

Tax Type	City of Madison	State of Wisconsin
Income ($M)	-	$2.7
Sales ($M)	-	$2.8
Business ($M)	-	$0.5
Hotel/Lodging ($M)	$1.7	-
Total ($M)	$1.7	$6.0

Source: City of Madison (2019), Wisconsin CAFR (2017), Econsult Solutions, Inc. (2019)

4. Impact from Additional Ancillary Spending

4.1 Section Overview

Beyond the ancillary spending drawn to campus by UW Athletics events, UW Athletics can take credit for two additional forms of spending that also have a multiplier effect throughout the state economy. The first is the purchase of UW-licensed merchandise in locations besides campus or at times other than when attendees are on campus for an event. The second is media buys associated with UW Athletics events. These additional spending categories, which can be estimated in part using data from UW Athletics, represent additional spending that enriches the state economy. While it is more difficult to calculate the full scope of their impact because of the proprietary nature of some of the variables, it is important to be considered when taking into account the overall impact of UW Athletics. Therefore, these impacts have not been added to the overall economic impact of UW Athletics, but they do represent economic activity beyond the categories previously described in this report.

4.2 Impact from Spending on Licensed Merchandise

"Bucky's Tuition Promise" pledges to cover four years of tuition and certain fees for all in-state students who are accepted to UW-Madison and come from families with incomes below the state median. The anticipated costs are paid in part from revenue sources such as licensing royalties.

UW Athletics' brand, sports teams, and sporting events are valuable products; and other businesses license the imagery related to these products in order to sell branded merchandise. Although UW Athletics does not make the merchandise, it allows others to make and sell products with UW Athletics imagery, and it collects a licensing fee off of the sale of the merchandise. That licensing fee is a benefit to UW Athletics, which it uses to invest in its student-athletes through providing scholarships, enhancing programing, and improving facilities. The revenues accrued to UW Athletics through licensing revenue has already been accounted for in the operations impact calculated in Section 2.

UW Athletics can also take credit for the impact from purchases of licensed merchandise in the local and state economies. When Badger merchandise is purchased within the Madison area or in the state of Wisconsin, some of that money flows through the economy (see Figure 4.1). The licensing fee paid to UW Athletics is only a fraction of the merchandise retail price. For every $40 sweatshirt sold by a merchant that sells licensed UW Athletics merchandise, the merchant might pay $4 to UW Athletics in licensing fees, resulting in a licensing fee of ten percent of the retail price (licensing fees can range from five to ten percent).

UW Athletics merchandise is sold all over the country, including throughout the state of Wisconsin. Those sales represent business activity throughout the state, and while only a portion of the retail price

actually stays in the state economy (much of it goes to the original manufacturer), the portion that does stay benefits local businesses, and therefore supports jobs in the state economy.

As noted above, approximately $4 of the $40 retail price for a t-shirt is paid to UW Athletics as a licensing fee. Of the remaining $36, the majority goes to the original manufacturer, who is most likely out of state. What remains in the state is the margin to the retail merchant, the cut to the wholesaler, and any other remaining cuts to those responsible for transporting and warehousing the product. In all, 25 to 50 percent of the retail price stays in-state to support the local economy.

Last year, UW Athletics earned $4.3 million in licensing revenue. Conservatively assuming a licensing fee percentage of ten percent would indicate retail sales of $43 million, generating $10.75 million in new economic activity. However, some of those retail sales are happening outside of Wisconsin, thereby not generating local economic impact. Further, visitors to UW Athletics events who then purchase Badger merchandise account for some of the retail purchases of branded merchandise. As we have accounted for the spending of those visitors in the previous section, we need to additionally reduce our calculation to estimate the net new economic activity spurred by the purchase of licensed merchandise.

UW Athletics sponsors an official merchandise store, **Bucky's Locker Room**, with 13 locations in the state and an accessible online store for shipping around the world. The store takes pride in its wide selection of high quality gear for UW fans, students, and alumni. UW Athletics receives a portion of the stores' profits to support the department and its student-athletes.

Table 4.1 – Estimate of the Economic Impact of Spending on UW Athletics Licensed Merchandise

Calculation	Estimate
Licensing Revenue Earned by UW Athletics	$4,300,000
(÷)Licensing Fee %	10%
(=) Implied Sales	$43,000,000
(x) Percent Retained Locally	25%
(=) Local Direct Impact	$10,750,000
(x) Adjustment for Sales Already Accounted For	50%
(=) Net New Sales	$5,375,000
(x) Economic Multiplier[7]	1.79
(=) Total Net New Impact	**$9,632,000**

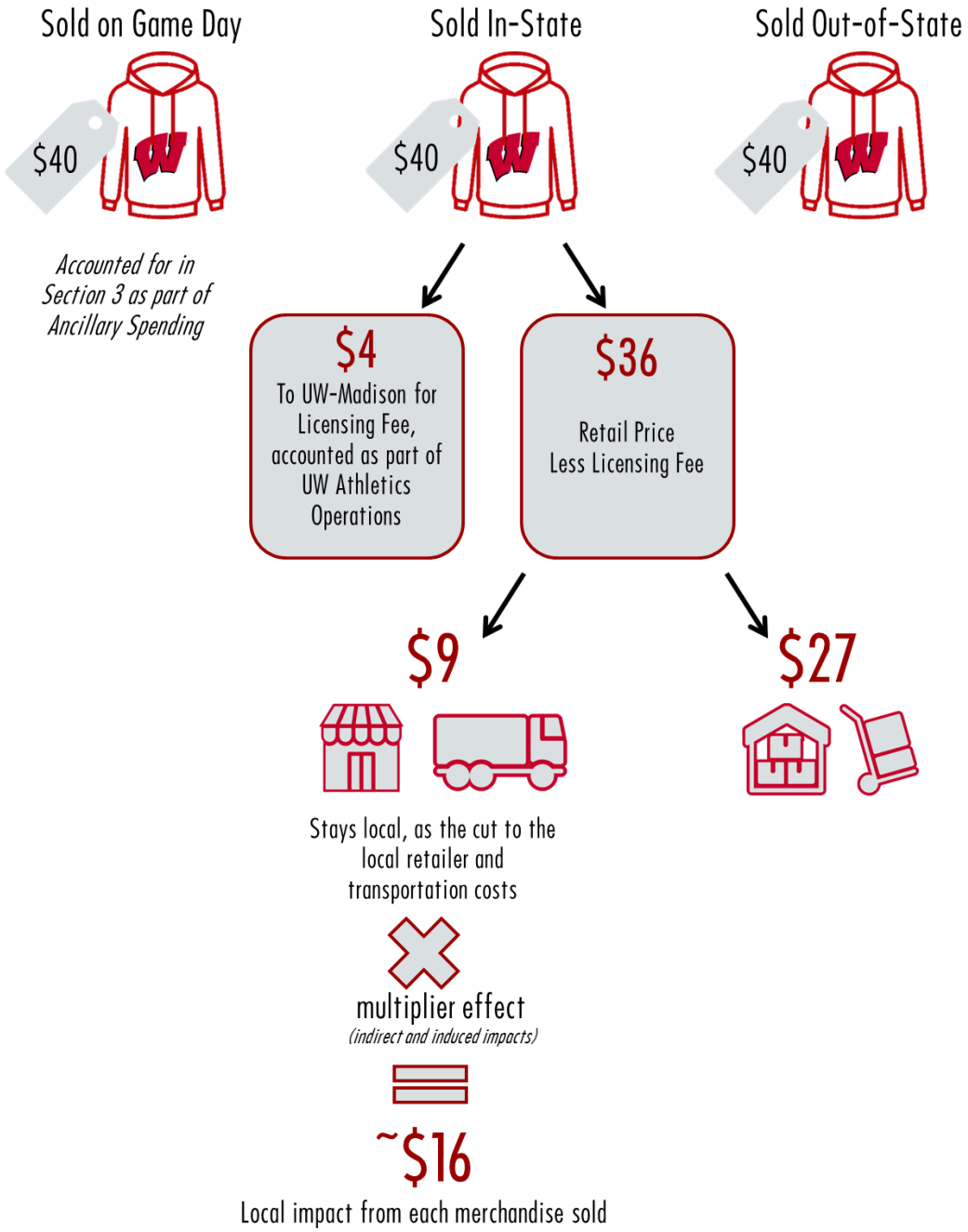
Source: UW-Madison Athletics (2019), IMPLAN (2015), Econsult Solutions, Inc. (2019)

With these considerations, **we can conservatively estimate that purchases of licensed UW Athletics merchandise add $9.6 million in net new economic activity in the state**. The multiplier effect within the

[7] Data from IMPLAN indicates that the multiplier effect for retail stores in Wisconsin can range from 1.79 to 1.95. We have conservatively used the low estimate of 1.79 for this calculation.

state economy means the total economic impact could be $9.6 million in Wisconsin per year. While we have not added this amount to the overall economic impact of UW Athletics, it illustrates another way that UW Athletics, by licensing its imagery to merchants, supports the state economy.

Figure 4.1 – How Does the Purchase of Wisconsin Merchandise Impact the State Economy?



4.3 Impact from Spending on Media Buys

UW Athletics also attracts ancillary spending through the media companies that are interested in broadcasting athletic events and selling advertisement space during that air time. Some of that ad space is used by UW Athletics itself, which imparts no small value to UW Athletics, UW, and the State of Wisconsin through promotion to a local, regional, and national audience. The value of these reputational gains is explored further in the next section. This section focuses on the impact not to UW Athletics but from UW Athletics to the state economy, which comes in two forms.

First, out-of-state advertisers pay money to advertise during a UW Athletics event. That represents new dollars that are drawn into the state from elsewhere and which produce a multiplier effect, supporting local jobs and local tax bases. Second, in-state advertisers use the advertising opportunity to promote their businesses and therefore gain more sales. The ability to advertise in this way thus grows the state economy by generating more sales.

That means that for every UW Athletics game that is broadcast, local and national companies have the opportunity to advertise to a captive audience of Badger fans and other sports enthusiasts—generating economic activity through their ad spending and expanding their business with a new customer base. Data provided by UW Athletics was used to estimate a conservative number of advertisement activity that occurs during a season. Table 4.2 estimates that total volume of advertising exposure that occurs during a typical season for the four largest Athletics teams. In total more than 2,000 advertising slots are supported by these four teams' broadcasted games—a conservative estimate that does not include the longer commercial slots during halftimes.

The Big Ten Network (BTN), launched in 2007, is the first national conference-owned television network. As a member of the Big Ten, the University of Wisconsin-Madison receives revenue generated by advertising when a UW Athletics game airs on the Big Ten Network. This agreement is a major way in which UW Athletics supports its operating activities. This also impacts the University as a portion of this revenue is directly transferred to the University, resulting in increased funding for need-based aid, enhancements to campus libraries, and additional funding for other activities at the University.

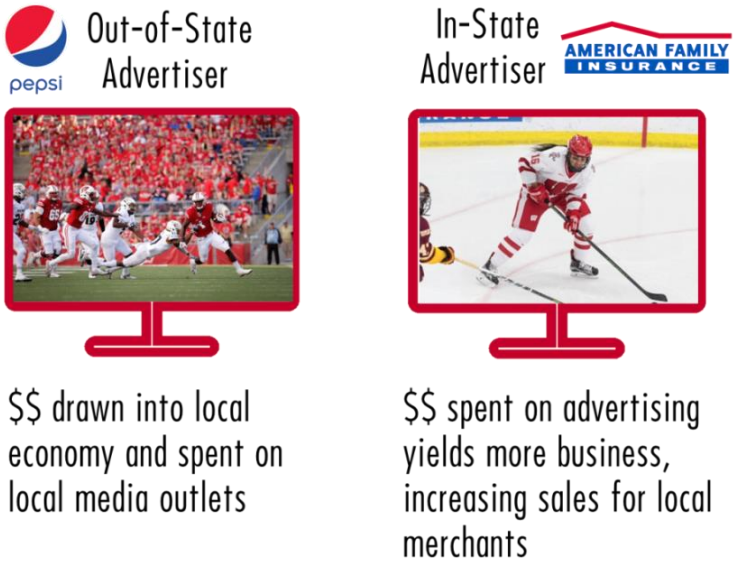
Table 4.2 – Estimate of Advertising Slots from a Sample of Broadcasted UW Athletics Teams[8]

Team	Games per season	Advertising spots per game	Total Ads per season
Football	7	74	518
Men's Basketball	20	42	840
Men's Hockey	19	12	228
Women's Basketball	17	28	476

Source: UW-Madison Athletics (2019)

[8] Commercials spots are typically 30 seconds in length. These estimates are a conservative estimate as they did not include commercials between halves or periods for football, men's basketball, or men's hockey.

Figure 4.2 – How Ads Sold During UW Athletics Events Benefit the Local Economy



While this activity certainly supports additional net new economic activity in the state, the specifics of the amount, dollar value, and advertiser information are all proprietary. We therefore have not quantified this activity nor added it to the overall estimate of UW Athletics' economic impact in Wisconsin. Nevertheless, this is yet another way that UW Athletics generates economic activity and economic impact in the state above and beyond its own footprint.

Beyond the value of spending on commercials and the subsequent economic activity that they generate, there is an additional value related to media exposure—the elevated visibility of UW on the national stage when the Badgers play on ESPN, the Big Ten Network, ABC, CBS, or other channels. The following section describes those reputational and social impacts in greater detail.



UW-Madison has a longtime partnership with American Family Insurance, through which American Family has promised to financially contribute to research, academics, service, and athletics at UW. In exchange, American Family is named the **"Official Insurance Sponsor of UW Athletics"** and receives prime marketing opportunities at UW Athletics events, including sign advertisements and a gate into Camp Randall Stadium named after the company. These types of partnerships mutually benefit the UW community and the local economy, which has elevated its profile because of its collaboration with UW Athletics.

5. Broader Societal Impacts

5.1 Section Overview

The overall economic impact of UW Athletics can be seen as the sum of the economic impact from its capital investments, its operating activities, and the ancillary spending from spectators and other visitors. Each of these impact categories contributes significantly to regional economic activity and demonstrates how universities help create vibrant communities and a competitive region. This section elaborates on the broader societal impacts that UW Athletics' economic activity supports. That includes enhancing the reputation of not only the University but also Madison and Wisconsin, as well as increasing a sense of connectivity and collegiality among UW students, staff, and alumni. In addition, UW Athletics supports the local and regional community through service, engaging with neighborhood schools, and educational opportunities. These impacts demonstrate UW Athletics' role within Madison and the state as a driver for economic growth, a magnet for talent and visitors, and an invested member of the community.

5.2 Gains from Reputational Enhancement

Collegiate athletics are not only a major driver of visitation to a region, but have been widely documented as a way to elevate a university's reputation among prospective students. The media coverage and airtime for every UW Athletics game is an opportunity for UW-Madison to showcase itself, the city of Madison, and the state of Wisconsin. The athletics department of a university thus becomes a point of entry for prospective students and a way to engage prospective students to learn more about the university as a whole.



In fact, several studies have assessed the impact of the success of an athletics department on a university's competitiveness in attracting prospective students, tracking the number of applications after a major game win. A study conducted by Harvard Business School Professor Douglas J. Chung found that a major football or basketball win increases applications to a college by 18.7 percent. As a result of this increase in applications, colleges can be more academically selective, which raises the institution's standing in national rankings and yields a more intellectually rigorous incoming freshman class. This study also determined that even students with higher-than-average SAT scores valued athletic

success, while still preferring institutions with greater academic quality.[9] Another study found that football and basketball success significantly increases the quantity of applications to a school, with estimates ranging from two to eight percent for the top 20 football and top 16 basketball schools each year.[10] Again, this increase in the number of applications due to an athletics win allows the university to be more competitive and selective of the quality of its future student cohorts, thus enhancing both its external reputation and its internal quality levels.

UW Athletics has agreements with 14 local media organizations for advertising, with an estimated value of more than $1 million in trade value. These relationships promote UW Athletics and the University in general across the region and throughout the state.



The impact an athletics department has on a college or university is not limited to an increase in student applications. The radio and television airtime for each game garners more "impressions," which represent value to the city and state in terms of reputation and tourism. A UW Athletics game that airs on radio or television is an opportunity for UW-Madison to showcase itself during advertising air time in terms of research discoveries, new technologies, and other innovations that arise out of the school beyond its athletics. This opportunity allows UW-Madison to tell its own story, encouraging the audience to associate not only athletics success with the University, but also other exciting research and discoveries. It provides an opportunity for the audience to form positive associations with the institution, the city of Madison, and the state of Wisconsin as a whole. As mentioned before, athletics helps to promote a region, providing a tangible point of entry to the whole of the University and the region's many tourism offerings.

5.3 Contributions to Social Cohesion and Connectivity Within the UW Community

Another role UW Athletics plays within the broader University community is enhancing a sense of connection and collegiality among UW students, staff, faculty, alumni, and other members of the University community within the region and beyond. An alma mater's connection often creates lifelong relationships among classmates who met during their undergraduate years, and regional organizations often serve as a beacon for important networking and professional advancement opportunities for involved alumni. University athletics can play a substantial role in cultivating a proud and engaged base of university boosters who

The National W Club comprises 9,677 Badger Letterwinners across the world; within Wisconsin there are 2,905 Letterwinners—highlighting a strong network of proud Badger alumni.



[9] Silverthorne, Sean, "The Flutie Effect: How Athletics Success Boosts College Applications," April 29, 2013, *Forbes.*
[10] Pope, D., & Pope, J. (2009). The impact of college sports success on the quantity and quality of student applications. *Southern Economic Journal*, 75, 750-780.

give back to their alma mater as well as the general university community of which they are a part, a point that will be discussed further in the ensuing section.[11]



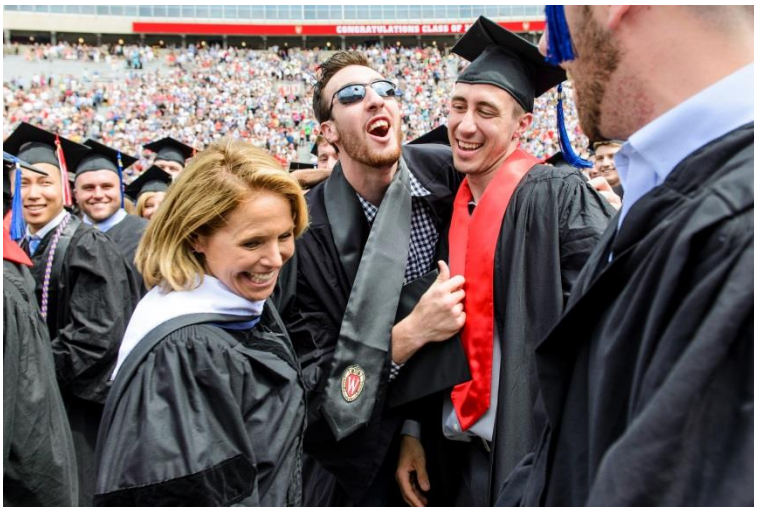
With numerous successful sports programs, UW Athletics serves as a meaningful connector within the University community. Engagement with athletics can play a major role in establishing and maintaining a sense of community. Being part of a community helps to improve one's emotional and physical well-being. This social cohesion also helps professional advancement as athletics can serve as a common denominator in career networks and helps to close business deals, serving as a conversation point to stay engaged within that network. Proof of this can be found among alumni of the University (including those that were not student-athletes), among former student-athletes who continue to build on the experiences they had as Badgers, and even among Madison residents and Wisconsinites who have an affinity for the Badgers.

Many university alumni programs offer opportunities to connect with their broader alumni network through local events and travel. Because of UW Athletics' meaningful role in the UW experience, many alumni programs center around participating in an Athletics-related event while reconnecting with fellow former Badgers. For example, the UW Alumni Association offers group tours to away football games, which includes Wisconsin-style tailgates, welcome events, special souvenirs and more. Many regional alumni chapters organize watch parties for major sporting events that are televised. These dynamics are important from a collegiality perspective but also because they are meaningful engagements for UW alumni to meet, strengthen their relationships, and potentially find or offer professional, social, or philanthropic opportunities within the community.



The Wisconsin Alumni Association has chapters in more than 75 cities worldwide. Alumni have the opportunity to get together to watch Badger games, host events such as Founders' Day celebrations, participate in student send-offs, participate in networking events, and help raise money for scholarships.

[11] Young, Elise, "The Gridiron Payoff?" *Inside Higher Ed*, July 3, 2012.



Another example of social cohesiveness is within the student-athletes' alumni community, thanks to the unique dynamics of a serious NCAA Division I sports program such as UW Athletics. Current and former Badger student-athletes have an important, shared experience as elite student-athletes who have participated in extensive athletic training during their college careers. The W Club recognizes the value of that experience, cultivating a place for former letterwinners to network, serve the community, and participate in alumni events.

Collegiate sports often serve as a cohesive force within their host communities—offering a common denominator for fans. As the flagship campus of the University of Wisconsin System, the prominence of UW Athletics on the national stage can be seen as a point of pride among Wisconsinites both at home and away, with the Badgers representing the state competitively across a number of sports.

5.4 Role of Athletics in University Fundraising

UW alumni are likely well aware of the impressive reputation that the University boasts as Wisconsin's flagship university and as a leading research institution. However, Athletics on its own is an especially important driver for alumni to connect back with the University and give charitably to the institution. In fact, in 2018, 13,596 donors contributed $40.2 million to UW Athletics, demonstrating the power that UW Athletics has in drawing outside dollars into the region (13.5 percent of contributions were from outside of Wisconsin), and its ability to keep local and regional alumni engaged and drawn to contribute to UW-Madison.

Studies show that NCAA Division I Athletics can be leveraged for giving to an institution's academic programing. Athletics is often an entry for prospective donors to give additional gifts to a university's academic activities. One study also showed that once a relationship is formed, donors that are inclined to donate to athletics frequently contribute in larger amounts to both the athletic and academic sides of their institution.

Athletics programs can play a major role in enhancing a university's overall development efforts. A study conducted by Jonathan Meer and Harvey S. Rosen analyzed detailed information about donations made by alumni of a selective research university, which also included an analysis of the alumni's economic and demographic characteristics. The study found that when a male graduate's former team wins its conference championship, his donations for general purpose increase by seven percent and his donations to the athletic program increase by about the same

percentage. Overall, athletics' success can drive overall private contributions.[12] Another study determined that for NCAA Division I institutions, a significant number of new donors who made their first gift to support athletics programs were twice as likely to give to athletics as well as academic programs in future donations. The study makes a case for using athletics as a way to attract donors to the institution, leveraging this to benefit, rather than crowd out, fundraising for academic programs.[13]



"I feel as though my experience with UW hockey and UW Athletics enhanced me as a person and helped me to get where I am. That's why I thought it was important to give toward something that other girls and guys will be using as they make their own Wisconsin journeys."
–Sharon Cole, captain of 2005-06 national women's hockey championship team

$13.5 million

UW Athletics contribution to $87.5 million capital project—The "Nick" Recreation Center

As mentioned in the prior section, athletics offers a source of social cohesion for alumni, providing a tangible way in which alumni can connect during game days. Gifts made to an athletics department are a clear way for alumni to see the direct impact of their gift, such as contributions to enhancements to existing facilities or scholarships for student-athletes, which they see during game days on the field or the court. The impact of alumni donations due to athletics has an impact on all students—for example, philanthropist Nancy Nicholas, UW-Madison '55, made a $20 million gift to the Division of Recreational Sports in honor of the late Albert "Ab" Nicholas, '52, MBA '55. The new recreational facility, the "Nick," will replace the aging Southeast Recreational Facility, and include more workout spaces, exercise studios, basketball courts, and an Olympic-size swimming pool for the swimming and diving teams. Athletics is contributing $13.5 million to support the completion of the facility. Ab Nicholas, a former guard for the men's basketball team, deeply valued his time at UW-Madison and continued to support the University in a variety of ways after his time there. The gift represents a desire to support as many students as possible with this new recreational facility.

[12] Meer, J., & Rosen, H. (2008). The impact of athletic performance on alumni giving: An analysis of microdata. *Economics of Education Review*, 28, 287-294.
[13] Jeffrey L. Stinson (2017) Leveraging Intercollegiate Athletics to Support Academic Giving at NCAA Division I Institutions, *Journal of Nonprofit & Public Sector Marketing*, 29:1, 1-19, DOI: 10.1080/10495142.2017.1293582.

5.5 Local Engagement and Service

Under the leadership of Director Barry Alvarez, UW Athletics is committed to serving the community in numerous ways. This is first and foremost reflected in the mission of UW Athletics, in which service to the community is important to the ethos of UW Athletics and the University.



UW Athletics leverages its recognition on and off the field to develop meaningful ways to give back to the community in which it resides. Badgers Give Back, established in 2012, is dedicated to making a difference in the community through meaningful engagement opportunities with UW student-athletes, staff, and alumni. In 2017-18, 644 student-athletes participated in the Badgers Give Back activities, which partnered with seven community partners in 361 community events.

Student-athletes also give back to the community in a number of other ways, which further establishes and echoes the UW Athletics' ethos of community. This includes a partnership with the Foundation for Madison Public Schools, where UW Athletics is a participant of the Adopt-a-School program. UW Athletics has "adopted" Randall Elementary and is using a multifaceted approach to help close the achievement gap for 370 students. One aspect of the program was a pen-pal program, where 636 letters were written between Randall students and UW student-athletes in 2017-18. These types of activities are often the first way that students in less-advantaged schools engage in a university setting. Participating in programs on college campuses is an opportunity for young students to learn about the undergraduate experience and serve as a starting point for them to envision a future that includes a college education.



Never lose sight of what your main goal is and that is working with young people. [Helping them] not only become good student-athletes, but good leaders and good citizens and being involved in giving back to the community.
—Barry Alvarez, Director of Athletics

Another tradition of community engagement includes weekly hospital visits, called “Badger Fridays,” a partnership with the American Family Children’s Hospital that allowed all UW teams to visit over 1,000 patients and their families. In tandem with these visits, the “Wish Upon A Badger” program, modeled after the international Make-A-Wish Foundation, has teams adopt kids for the school year. In 2017-18, 21 children were in the program while they underwent cancer treatments or recovered from major surgeries. This experience provided them a way to connect and engage with student-athletes, tour UW Athletics facilities, and helped to foster and extend a supportive community for them as they underwent major treatments and surgeries. These are but some of the tangible ways in which student-athletes give back to the greater Madison area, leveraging their recognition, resources, and presence to help youth in the community.

6. Conclusion

6.1 Summary of Economic Impacts

UW Athletics' aggregate economic impact derives from direct, indirect, and induced effects in three mutually exclusive categories of economic activity directly attributable to the institution:

1. *Annual operations*, including the broad base of employment, procurement, and administrative activities that comprise the daily activities of UW Athletics. These impacts are estimated to be at $293 million annually within the State of Wisconsin.
2. *Capital investments*, which include state-of-good repairs, renovations, and ongoing maintenance of facilities. These impacts are estimated at $20 million annually within the state.
3. *Ancillary event attendee spending*, reflecting participants and attendees drawn to the area by UW Athletics that support the local hospitality, food, and retail industries. These impacts are estimated at $298 million within the state.

In the aggregate, UW Athletics generates an annual economic impact of approximately $610 million within the state, supporting 4,480 jobs and $197 million in earnings (see Table 6.4). Of that impact, $395 million takes place within Madison, supporting 2,950 jobs and $130 million in earnings (see Table 6.1).

Table 6.1 – Annual Economic Impact of UW Athletics on the Madison Economy

Impact Type	Operations	Capital Investments	Ancillary Event Attendee Spending	Annual Total
Total Output ($M)	$203	$14	$177	**$395 million**
Annual Employment Supported	1,070	80	1,800	**2,950**
Employee Compensation ($M)	$79	$5	$46	**$130 million**
Tax Revenues ($M)	-	-	$1.7	**$1.7 million**

Table 6.2 – Annual Economic Impact of UW Athletics on the Dane County Economy

Impact Type	Operations	Capital Investments	Ancillary Event Attendee Spending	Annual Total
Total Output ($M)	$254	$18	$242	**$515 million**
Annual Employment Supported	1,370	110	2,330	**3,810**
Employee Compensation ($M)	$94	$6	$66	**$165 million**

Table 6.3 – Annual Economic Impact of UW Athletics on the Greater Madison Area Economy

Impact Type	Operations	Capital Investments	Ancillary Event Attendee Spending	Annual Total
Total Output ($M)	$255	$19	$266	**$540 million**
Annual Employment Supported	1,370	110	2,560	**4,040**
Employee Compensation($M)	$94	$6	$72	**$171 million**

Table 6.4 – Annual Economic Impact of UW Athletics on the Wisconsin Economy

Impact Type	Operations	Capital Investments	Ancillary Event Attendee Spending	Annual Total
Total Output ($M)	$293	$20	$298	**$610 million**
Annual Employment Supported	1,590	110	2,780	**4,480**
Employee Compensation ($M)	$111	$6	$80	**$197 million**
Tax Revenues ($M)	$5.3	$0.4	$6.0	**$12 million**

6.2 Return on Investment

Articulating the Return on Investment (ROI) of UW Athletics is a simple, yet powerful, way to measure performance, evaluating the efficiency of an investment by comparing its return relative to the initial cost. In today's economy, it has become increasingly popular to evaluate higher education and its related programs using an ROI framework, especially through the lens of rising tuition rates. At a time when the higher education proposition is being questioned, it is helpful to understand the ROI from the perspectives of its stakeholders, including the State of Wisconsin and its taxpayers, the City of Madison and the community surrounding UW, as well as past, present, and future students and student-athletes.

As a self-funding department within the University, UW Athletics is a net benefit to the institution and to local, regional, and state economies. Athletics draws from funding sources such as tickets, concessions, licensees, and media royalties to fully support its program and to generate and transfer resources to the University for financial aid for students. Importantly, these revenue sources often are drawn from outside of Wisconsin, whether it is out of town visitors (or opposing teams or national media) coming to Madison for a game, the purchase of Badger apparel from outside the state, or the returns from fees for streaming UW Athletics on major networks.

These influxes of dollars produce a significant economic impact on the city and state economies, as described throughout this report and aggregated in the previous sub-section. They represent a meaningful return to the local and state economy on investments made by local and state governments. Having articulated what is meant by "return" in the form of economic activity, jobs supported, and tax revenues generated, it is instructive to explore what is meant by "investment" in this context.

At a local level, the City of Madison bears some expenditure that make UW Athletics possible, such as providing public safety resources and investing in infrastructure to handle the visitor volume generated

by UW Athletics events. At a state level, the State of Wisconsin financially supports the University of Wisconsin, including UW Athletics. Because universities and their athletic departments are not-for-profit entities and as such do not pay taxes, they are often accused of not "paying their fair share," which is an argument borne of a return on investment framework, namely that the public sector has made some form of investment in them and does not appear to have received any compensatory return for that investment. As demonstrated throughout this report, though the University of Wisconsin is at its core an educational and research institution and UW Athletics is focused on sports, in fact these functions are major economic engines for the city and state. As has also been demonstrated throughout this report, though UW and UW Athletics are tax exempt not-for-profit institutions, they are still significant tax-generating entities for the City and State governments. This then is the return from UW Athletics on the investment by local and state government, which is a significant multiplier of economic activity, jobs supported, and tax revenues generated.

6.3 UW Athletics' Broader Return on Investment

Beyond the significant economic activity and positive fiscal impact produced by UW Athletics are broader returns that are enjoyed at a community, regional, state, and societal level. Investments made and expenditures borne by UW Athletics improve the visitor experience for thousands of fans and participants every day, drawing additional dollars into the local and state economy and creating spillover impacts that positively affect a wide range of industry sectors. They also enhance the reputation of the University and the state as a whole, yielding a deeper and better student applicant pool, which improves the University's national academic rankings as well as the quality of its intellectual community. That has profound implications for the region's future competitiveness, since the University is an important anchor participant and provider of intellectual capital and research infrastructure.

The shared experience of rooting for the home team builds social cohesion that connects together the broader University diaspora, as a common rooting interest breaks the ice professionally and socially, expediting business deals and yielding friendships that transcend geography. This same shared experience is also a powerful upfront introduction and ongoing cultivation as it relates to alumni giving to the University, which in addition to benefitting the University also draws dollars back to Madison and Wisconsin (and often also strengthens the connection for alumni to Madison and Wisconsin, resulting in return trips for business and/or pleasure).

Finally, under the leadership of Athletic Director Alvarez, UW Athletics has instilled a strong commitment to local engagement and community service. This is reflected in service initiatives that not only benefit the community but also help form student-athletes who will be caring citizens off the field during their time on campus and who will be committed to lifelong service upon graduation. Even in light of the impressive economic impact estimates featured here, as well as the many other broader benefits described throughout this report, this may be the most important return generated by UW Athletics—the education and development of young women and men who will remain connected to the University and the state, and to a commitment to service that they learned as student-athletes.

UW Athletics Alumni Remain Leaders On and Off the Field



Jake Wood, '05

Badgers' varsity football lineman **Jake Wood** decided after graduation to serve the nation in the Marine Corps. For his service in conflicts in both Afghanistan and Iraq, Wood was awarded the Marine Corps Commendation Medal. Now, Wood continues to spread good in his community. He founded a nonprofit organization, Team Rubicon, that helps veterans serve in disaster zones, which began when it deployed Wood and his first team to help with hurricane relief efforts in Haiti.



Carey Lohrenz, '90

Winner of three varsity rowing letters at UW, **Carey Lohrenz** has continued to promote UW's service ideals through military service, authorship, and leadership. Lohrenz began a career serving in the US Navy and quickly became the first female pilot to fly the F-14 Tomcat. After resigning from the service, Lohrenz began to utilize her military experience to help encourage others to lead in different contexts.



Al Toon '85 (pictured on the far right)

UW-Madison star wide receiver **Al Toon, Jr.** has excelled as a professional athlete, businessman, and philanthropist. After playing for eight seasons with the New York Jets, Toon returned to Wisconsin, as owner and partner in Olson Toon Landscaping, director and founding member of Capitol Bank, and operator of several franchises. He remains active in UW Athletics and committed to service through his work with the Boys & Girls Club and other organizations.



Meghan Duggan, '11

Meghan Duggan, women's ice hockey star at UW, continues to play her sport with the passion of a UW student-athlete. Duggan has represented her nation in the last three Winter Olympics, serving as team captain for the last two. She has helped earn the US two silver medals and one gold medal. Duggan also was a leading figure in the national team's efforts to attain compensation equal to that of their male counterparts.



J.J. Watt, '10

Former Badger football All-American **J.J. Watt's** impact has been equally impressive on and off the field. A three-time NFL Defensive Player of the Year, five-time Pro Bowl selection and 2017 NFL Man of the Year, Watt has established himself as one of pro football's elite performers. His community contributions include raising close to $40 million for Hurricane Harvey relief in 2017. Watt has also raised more than $1 million through the Justin J. Watt Foundation to support afterschool athletics programs.

Appendix A – Report Methodology

The purpose of this appendix is to highlight the scope and methodology of this report and of the quantitative analysis tools used in it, so that its findings can be properly understood and interpreted. Additional detail on the methodology and data sources used to calculate the direct economic impact in each component category and the economic and fiscal modeling undertaken can be found in the appendices that follow.

A.1 Scope of Analysis

Economic and fiscal impacts are calculated in four categories of activity: UW Athletics expenditures on operations, UW Athletics' expenditures on capital investments, ancillary spending by participants and visitors attracted or retained by UW Athletics, and other spending generated by ancillary activity. Impacts are calculated on an annual basis, and are undertaken in non-overlapping fashion, meaning that they can be summed to represent aggregate impact. The goal of this analysis is to quantify the current annual level of economic activity associated with UW Athletics. Data inputs on institutional activity are largely provided by UW Athletics, and are verified and supplemented with other public data sources. In addition, assumptions are at times required to estimate the level of activity where direct data is not available. These assumptions are anchored in research and available information, and are detailed transparently throughout the report and appendices.

For each input, the most recent and appropriate available dataset is utilized. In the case of institution data, this information often but not always covers FY 2018 (the most recently completed fiscal year). 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, rather than representing the impact for any specific fiscal year.

The geographies of interest for this study are the City of Madison, Dane County, Greater Madison Area, and the State of Wisconsin. Economic impacts are calculated for each of these geographies, while tax revenue impacts are calculated for Madison and Wisconsin.

Economic impact analyses can estimate the magnitude of either the net or gross impact of its subject. A net impact analysis, which sometimes takes the form of a cost-benefit analysis, develops a "counterfactual" that overall impact amounts are netted against impact levels that might have occurred anyway in place of the subject's existence and operations. This form of analyses, while appealing in its economic logic, is often highly speculative. In this case, such an analysis would require modeling an alternative development path for the local and regional economy over decades absent UW Athletics. This report takes a gross, rather than net, approach to measuring UW Athletics' economic impact. With this approach, the direct, indirect, and induced activity associated with UW Athletics is estimated without accounting for potential offsetting increases in activity in other institutions or sectors absent UW Athletics. Therefore, economic impact figures implicitly represent a comparison of current activity levels to a scenario in which the institution does not exist, and all other activity within the economy is held constant.

It should also be noted that impacts are only estimated in four categories that are common to economic impact studies, and for which data sources and calculation frameworks are well-defined. However, these categories do not represent the only potential economic impacts of UW Athletics, which contributes to knowledge activity in ways that defy straightforward quantification. Thus, while aggregate results in this analysis are gross rather than net, they are conservative as to the categories of impact that can be reliably measured.

Appendix B – 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 Wisconsin.

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 the fiscal model utilized to estimate tax revenue impacts to local and state government from UW Athletics' economic activity.

B.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, UW Athletics' total economic impact is the sum of its own direct economic footprint, plus the indirect and induced effects generated by that direct footprint.

Indirect and induced impacts grow at each successive level of geography, due both to more purchasing and recirculation activity happening within the larger geography and to a greater capture of downstream activity. For example, procurement that takes place elsewhere in the region outside of Dane County increases its Greater Madison Area impact relative to its Dane County impact. Further, purchasing taking place in Dane County has spillover impacts to the other four counties in the region, meaning that regional spillover impacts are also higher.

Input-Out 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 on 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. Information from UW Athletics on the location of its purchasing and the residential location of its employees and alumni are used to refine IMPLAN's calculation of purchasing patterns where appropriate to generate more customized estimates of indirect and induced impact. Importantly, procurement and employee locations are perfectly analogous to the indirect (supply chain) and induced impacts (labor income) effects within an area, both because initial expenditures trigger multiple waves of recirculation with various suppliers and because employees that live in one jurisdiction may still spend their earnings in part in another jurisdictions, particularly if it is where they work. To incorporate UW Athletics-specific information while retaining the impact of broader geographic spending patterns, local purchasing and employment information for Madison is averaged with patterns assumed by IMPLAN from industrywide data to yield the local activity assumption used to model indirect and induced impacts. As described below, additional adjustments are made to estimate impacts for Madison.

B.2 Tax Revenue Impacts

The direct, indirect and induced economic output from UW Athletics' 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 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 State of Wisconsin.

For a non-profit entity such as University of Wisconsin-Madison, care must also be given to ensure that taxable and non-taxable activity types are properly distinguished. Most notably, UW's direct activity is not subject to any sales, income or property tax. However, income generated by UW's employment footprint is subject to local wage tax and Wisconsin income tax. In addition, the indirect and induced impact of UW's activity as it ripples throughout the economy occurs broadly within the private sector of the economy, and is therefore understood to be tax generating. In addition, the additional earnings of alumni attributable to the wage premium provide a significant boost to the state's income tax base.

It is important to note that while local economies within the region are wholly contained within the Wisconsin economy, local and State governments are separate and distinct entities with distinct tax bases and revenues.

Therefore, fiscal impacts do not overlap – each represents distinct tax revenues generated to the respective governments.

In addition, it is acknowledged that UW's activity also generates taxable activity within and therefore tax revenues to additional jurisdictions besides the City of Madison and State of Wisconsin, including within suburban jurisdictions throughout the Greater Madison Area. These amounts are much smaller than the ones calculated here, and are excluded from this analysis.

Appendix C – Ancillary Spending

Calculating ancillary visitor spending requires an estimation of the volume and type of visitors that come to UW Athletics events for various reasons, and the application of spending profiles to each of those visitor types. As detailed in Section 3, data provided by UW Athletics provided the volume of visitors, which we then sorted by visitor category using ticket sales data and industry estimates: 1) students/local, 2) regional (day trip), and 3) overnight (see Table C.1).

Table C.1 – Volume of Visitors by Visitor Category and Event Category

	Students/Local	Regional (day trip)	Overnight
Football	184,200	310,700	90,000
Other UW Athletics Events	309,700	397,100	71,600
Other UW Athletics Hosted Events	167,900	129,600	187,100

Source: UW-Madison Athletics (2019)

Spending profiles were developed by visit type to reflect that visitor spending patterns vary based on point of origin (local vs. out of town), reason for visit, and other factors. Unique spending patterns were estimated for each visitor category using available proxy data on national travel trends and local hotel rates.

Table C.2 shows the spending profiles of each visitor type by expenditure category. The spending profile for students/local visitors are estimated for football games, due to the national following and draw that football has in attracting attendees. Therefore, the ancillary impacts of football are captured for students and local visitors, since students and local visitors would have not otherwise spent in the economy if it were not for a football game. The ancillary impacts for the other two event categories are not captured for students/local visitors, as student spending for these events are likely captured in direct operating activities, while the spending of local visitors are already captured in the local economy.

All ancillary spending within Table C.3 is estimated to take place within Wisconsin, except for transportation, as overnight visitors are more likely to spend their transportation dollars somewhere else and not within the Wisconsin economy. Then each spending category is further reduced by geography. Since every visitor is likely to spend different amounts throughout the state, an adjustment is needed to estimate how much spending actually takes place within the city, within the county, within the Greater Madison Area, and within Wisconsin.

Table C.2 – Spending Profiles per Visitor Type

	Lodging	Food	Transportation	Retail	Spend per Visitor
Football					
Local/Students	$0	$15	$0	$15	**$30**
Regional (Day Trip)	$0	$31	$11	$30	**$71**
Out of Town (Overnight)	$154	$61	$22	$60	**$296**
Out of Region Team (Overnight)	$88	$61	$0	$0	**$149**
Other UW Athletics Events					
Local/Students	$0	$0	$0	$0	**$0**
Regional (Day Trip)	$0	$31	$11	$30	**$71**
Out of Town (Overnight)	$82	$61	$22	$60	**$224**
Out of Region Team (Overnight)	$61	$61	$0	$0	**$122**
Other UW Athletics Hosted Events					
Local/Students	$0	$0	$0	$0	**$0**
Regional (Day Trip)	$0	$31	$11	$30	**$71**
Out of Town (Overnight)	$82	$61	$22	$60	**$224**
Out of Town (Multi-Day Overnight)	$82	$61	$22	$30	**$195**

Source: UW-Madison Athletics (2019), Econsult Solutions, Inc. (2019), Kayak.com (2019), General Services Administration (2019)

Table C.3 – Estimated Ancillary Visitor Spending Captured within Each Exclusive Geography

	Madison	Dane County	Madison Area	Wisconsin
Lodging	50%	75%	90%	100%
Food	80%	90%	95%	100%
Transportation	50%	60%	65%	70%
Other Retail	80%	90%	95%	100%

Source: Econsult Solutions, Inc. (2019)

After developing the spending profile for each visitor category and event category, and then making an adjustment to where these visitors are actually spending within the respective geographies, Table C.4 then shows the total spending estimates by spending category within the respective geographies.

Table C.4 – Total Ancillary Spending

	Total Ancillary Spending	City of Madison	Dane County	Greater Madison Area	State of Wisconsin
Housing / Lodging					
Football Attendees	$27.3	$13.7	$20.5	$24.6	$27.3
Other Athletic Event Attendees	$5.8	$2.9	$4.4	$5.2	$5.8
General Visitors	$31.4	$15.7	$23.6	$28.3	$31.4
Total	$64.6	$32.3	$48.4	$58.1	$64.6
Food & Beverage					
Football Attendees	$23.2	$18.5	$20.9	$22.0	$23.2
Other Athletic Event Attendees	$16.5	$13.2	$14.8	$15.7	$16.5
General Visitors	$27.2	$21.8	$24.5	$25.9	$27.2
Total	$66.9	$53.5	$60.2	$63.6	$66.9
Local Transportation					
Football Attendees	$7.3	$3.6	$4.4	$4.7	$5.1
Other Athletic Event Attendees	$5.9	$2.9	$3.5	$3.8	$4.1
General Visitors	$9.8	$4.9	$5.9	$6.4	$6.8
Total	$22.9	$11.5	$13.8	$14.9	$16.0
Retail & Entertainment					
Football Attendees	$22.6	$18.1	$20.4	$21.5	$22.6
Other Athletic Event Attendees	$16.0	$12.8	$14.4	$15.2	$16.0
General Visitors	$16.7	$13.4	$15.0	$15.9	$16.7
Total	$55.4	$44.3	$49.8	$52.6	$55.4
SUM					
Football Attendees	$80.4	$54.0	$66.1	$72.9	$78.3
Other Athletic Event Attendees	$44.2	$31.8	$37.1	$39.9	$42.4
General Visitors	$85.2	$55.8	$69.0	$76.4	$82.2
Total	**$209.8 million**	**$141.6 million**	**$172.2 million**	**$189.2 million**	**$202.9 million**
(Retail margin deduction) ($M)		($21.2)	($26.0)	($27.5)	($28.9)
Modeled Ancillary Spending		**$120.4 million**	**$146.2 million**	**$161.7 million**	**$174.0 million**

Source: UW-Madison Athletics (2019), Econsult Solutions, Inc. (2019)

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