

# THE ECONOMIC CONTRIBUTION OF GRIZZLY INTERCOLLEGIATE ATHLETICS

August 2016

#### **Prepared for:**

The University of Montana Department of Athletics

#### Prepared by:

Bureau of Business and Economic Research University of Montana Missoula. MT 59812



#### Acknowledgements

This report was produced and authored by Patrick Barkey and Kyle Morrill, from the Bureau of Business and Economic Research at the University of Montana. The research was supported by Grizzly Athletics. All statements and conclusions of the report are those of the authors and do not represent the position of the University of Montana. The authors would like to acknowledge the cooperation and support of Greg Sundberg, Ryan Martin and Kent Haslam from Grizzly Athletics, who provided helpful information for this report. All errors and omissions, of course, remain our own.





# **Table of Contents**

Executive Summary	4
How Grizzly Athletics Makes the Economy Larger	5
Employment Impacts	5
Impacts on Area Businesses	6
Summary and Conclusion	7
About this Study	8
1. Background and Overview	9
About the Bureau of Business and Economic Research	9
About Grizzly Athletics	10
About This Study	10
2. Research Method	10
The REMI Model	12
3. Direct and Indirect Impacts of Grizzly Athletics	12
Grizzly Athletic Operations	15
Employment	16
Visitor Spending	16
Student-Athlete Spending	17
Taxes and Subsidies	18
Other Indirect Impacts	18
Summary	19
4. The Economic Contribution of Grizzly Athletics	20
Summary of Findings	20
Employment Impacts	21
Personal Income Impacts	22
Output Impacts	24
Population	24
Summary	25
5. Conclusion	26
6. References	27
Appendix: REMI Tables	28

# **Executive Summary**

The entire spectrum of ways in which University of Montana's intercollegiate athletic activities – Grizzly Athletics – enrich and expand the economy of Missoula is broad. Intercollegiate sports in general, and the University of Montana's sports programs in particular, have grown in popularity, impact and visibility. While those programs have always been aimed at providing the opportunities for student-athletes to grow, develop and ultimately realize both their athletic and scholarly potential, the business aspects of the spectator sports activities – everything from spending by attendees to the marketing of apparel and merchandise – have important consequences for businesses, households and government in Missoula.

This study examines the size and scope of those economic contributions. Specifically, this study poses the question, "What would the economy of Missoula look like if Grizzly Athletics did not exist?" Using information from financial records, ticket sales, attendance, and a survey of Grizzly football season ticket holders, we have estimated how much larger the economy of today is – in terms of jobs, income, spending and population – than would be case if the Grizzly Athletics were not a part of it.

#### **Impacts Summary**

Category	Units	Impact
Total Employment	Jobs	1,384
Personal Income	\$ Millions	52.8
Disposable Personal Income	\$ Millions	44.9
Output	\$ Millions	120.8
Population	People	1,334

We find that the Missoula economy today is significantly larger, with more jobs, more income and home to more people and families, because of University of Montana athletics. Specifically we find that the following exist in the Missoula economy today because of Grizzly Athletics:

- The equivalent of 1,384 permanent, year-round jobs.
- \$52.8 million dollars per year in income received by Missoula households, including \$44.9 million in after-tax income.
- \$120.8 million per year in output, or gross sales by Missoula businesses and other organizations.

Because of the many ways in which athletic activities act to make the economy larger, and because those who receive wages or revenues for goods and services related to athletics spend a portion of what they receive in the local economy, the types of jobs and the kinds of businesses which ultimately benefit from the presence of Grizzly Athletics in the community is broad.

#### How Grizzly Athletics Makes the Economy Larger

From the point of view of the economy, Grizzly Athletics can be thought of as a spectator sports business whose "employees" include – in addition to paid coaches, administrators, trainers and staff – the hundreds of student-athletes whose compensation comes in the form of scholarships, housing, and other aid. As a \$22.9 million business, Grizzly Athletics is itself a significant enterprise, with payroll and vendor spending supporting a broad range of Missoula businesses. This study utilized University of Montana financial records to track and classify the spending of Athletics – down to the level of individual purchase orders – for the academic year 2014-15.

Of course, as a result of those activities, thousands of people visit Missoula to attend athletic events. Their spending, on everything from hotel rooms to health care, adds significantly to the local economy. From a survey conducted by BBER based on season ticket holders for Grizzly Football, we created a spending profile for out-of-area visitors who attend games. This spending is substantial. For example, each home football game brings about \$2.5 million of spending into Missoula from out-of-area attendees, whose dollars would not be spent in Missoula if it were not for Grizzly Athletics. Spending by attendees of other sports adds to this total.

#### **Profile of Griz Football Visitor Spending**

Category	Units	Amount
Group Size	Persons	2.7
Nights in Missoula	Nights	1.98
Spending per Group per Day	\$	\$200.60
Total Spending per game (excluding air fare)	\$ Millions	2.53

Because of Grizzly Athletics, non-resident student-athletes live in Missoula. Visiting teams come to Missoula, along with officials and sports media. All of these spending flows ultimately add to the Missoula economy.

#### **Employment Impacts**

The breadth and scope of Grizzly Athletics' contributions to the Missoula economy can be seen from the kinds of jobs in the economy which are present because of Athletics. Not surprisingly, a large number of jobs created by Grizzly Athletic activities are in the arts, entertainment and

recreation industry classification, which contains spectator sports. But there are jobs supported in seemingly unrelated industries as well. 20 health care jobs, 19 professional services jobs, and 76 jobs in state and local government exist in Missoula because of Grizzly Athletics. Many of the government jobs are found in public schools, which have more students because of the families who live in Missoula because of Athletics.

There are many jobs in both retail trade and in accommodations and food services that exist because of Grizzly Athletics. These jobs are directly related to visitor spending, but are also impacted by the spending of those employed by Athletics, the student-athletes, as well as the vendors who do business with Grizzly Athletics. There is also a significant impact on construction jobs because of Griz sports.

#### **Employment Impacts**

Industry	Impact
Construction	85
Retail Trade	116
Real Estate and Rental and Leasing	13
Professional and Technical Services	19
Health Care and Social Assistance	20
Arts, Entertainment and Recreation	886
Accommodation and Food Services	152
Other Private Employment	19
State and Local Government	76
TOTAL	1,384

#### **Impacts on Area Businesses**

Another important way to look at the contributions of University of Montana intercollegiate athletic activities make to the Missoula economy is to look at them from the point of view of Missoula businesses and other organizations. Ultimately, there is \$120.8 million of gross sales, or output, enjoyed by these businesses that are due to the presence of Grizzly Athletics in the economy. A third of these sales occur to businesses in retail trade – but the sales impact of Athletics is felt by a broad spectrum of Missoula providers of goods and services.

#### **Output Impacts, \$ Millions**

Category	Impact
Construction	10.7
Wholesale Trade	10.5
Retail Trade	42.3
Real Estate and Rental and Leasing	3.4
Professional, Scientific and Technical Services	2.7
Administrative and Waste Management Services	0.9
Health Care and Social Assistance	2.1
Arts, Entertainment, and Recreation	23.5
Accommodation and Food Services	12.9
Other Services, except Public Administration	0.6
State and Local Government	8.1
TOTAL	120.8

#### **Summary and Conclusion**

This study has examined the continuing contributions that the University of Montana intercollegiate athletic activities – Grizzly Athletics – make to the economy of Missoula. As an organization with \$22.9 million in annual revenue, employing 78 paid employees and hundreds more student-athletes who receive tuition support and living expenses, Grizzly athletics is a sizable business activity in its own right. But the spending of out-of-area visitors to its sporting events, as well as other related spending flows, greatly add to its economic footprint.

When compared to a hypothetical economy in which the Grizzly Athletics does not exist, we find that the presence of Grizzly Athletics in the Missoula economy ultimately supports:

- 1,384 permanent jobs, spread across a wide spectrum of industries.
- \$120.8 million in gross sales, or output, of Missoula-area businesses and other providers of goods and services.
- \$44.3 million in annual earnings, including wages, benefits and earnings of the self-employed.
- \$52.8 million in income of all kinds to Missoula households, of which \$44.9 million is after-tax income.
- An increase in Missoula population of 1,334 people.

Thus, we conclude that the presence of Grizzly Athletics in the Missoula economy has been of significant economic benefit and its continued growth will expand the size of its economic footprint in the community.

#### **About this Study**

This report was produced and authored by Patrick Barkey and Kyle Morrill, from the Bureau of Business and Economic Research at the University of Montana. The research was supported by Grizzly Athletics. All statements and conclusions of the report are those of the authors and do not represent the position of the University of Montana. The authors would like to acknowledge the cooperation and support of Greg Sundberg, Ryan Martin and Kent Haslam from Grizzly Athletics who provided helpful information for this report. All errors and omissions, of course, remain our own.

# 1. Background and Overview

Intercollegiate athletics play a major role in colleges and universities, individual communities and in American culture. At the individual level, participation in intercollegiate athletics by student-athletes represents an opportunity for young men and women to grow, develop and ultimately realize their potential. The high visibility and popularity of organized sports activities have projected the brand of conferences and individual educational institutions into the limelight in ways that have benefitted everything from student recruitment to alumni involvement. And the business activity surrounding college sports in the American economy has grown to support what has become a multi-billion dollar industry.

Communities that are home to colleges and universities that participate in intercollegiate athletics stand to reap considerable economic gain from those activities. These gains are both tangible and intangible. The spending and income flow that the existence of intercollegiate athletics at a local college or university add to the local economy can be directly measured and assessed. The ultimate benefits of media exposure, visitor impressions, and branding that a community may experience due to its university athletic activities are harder to assess, but no less important.

This study aims to bring those benefits to our attention. Specifically, we will demonstrate how intercollegiate athletics at the University of Montana – Grizzly Athletics – ultimately makes the economy of its host community of Missoula larger, more prosperous and more populous. To achieve this result we imagine how the Missoula economy might look in the absence of Grizzly athletics – without the ticket sales, without the training camps, without the game day visitors, and without the athletes, coaches and facilities. Understanding the economic significance of these activities, and how they propagate to the economy as a whole, is the objective of this report.

#### **About the Bureau of Business and Economic Research**

The Bureau of Business and Economic Research (BBER) was founded as the research arm of The University of Montana's School of Business Administration in 1948. As set forth in its mission statement,

"The purpose of the Bureau is to serve the general public, as well as people in business, labor, and government, by providing an understanding of the economic environment in which Montanans live and work."

BBER has developed over the years to become one of the most sought-after sources of information and analysis on the Montana economy. It has published the Montana Business Quarterly, its award-winning business periodical, since 1962 and has conducted the Montana Poll, a quarterly sentiment survey of the Montana adult population, since 1980.

#### **About Grizzly Athletics**

The University of Montana is a member of the Big Sky Conference and affiliated with Division I of the national Collegiate Athletic Association (NCAA). Grizzly Athletics has had a long history of success both on and off the field in men's and woman's sports. With the addition of women's softball beginning competition in 2015, it now encompasses five men's and eight women's sports teams. In the fall of 2016, UM landed 58 student-athletes on the Big Sky Conference All Academic teams and held a student-athlete wide GPA of over 3.0. UM also announced and broke ground on a \$14 million training facility, the Washington Grizzly Champions Center, that includes a state of the art weight room, as well as a new locker room and meeting space for the UM football team.

#### **About This Study**

This study was carried out by the Bureau of Business and Economic Research at the University of Montana. It was conducted during the fall of 2015 and the spring of 2016. It was sponsored by the University of Montana - Department of Athletics.

# 2. Research Method

The fundamental question addressed by this study is, "What would the economy of Missoula look like if Grizzly Athletics did not exist?" This question requires us to construct a hypothetical economy which removes all of the production, income and spending flows that are due to Grizzly Athletics' existence. We accomplish this by (i) gathering data on the economic flows that are directly and indirectly associated with athletic activities, and (ii) presenting this information to an economic model to understand how those flows ultimately propel the economy to a new equilibrium – with less employment, income, and output as a result. A comparison of the observed level of economic activity and the outcome for this no-athletics scenario yields a measure of the contribution of Grizzly Athletics to the Missoula economy.

There are three essential components to estimating the ultimate impact of new investment. These are:

- The *direct impact* (e.g., spending) the investment and activity itself represents.
- The *indirect impacts*, which are the spending of other entities (e.g., the visitor spending) which are carried out by others because of the original investments.
- The *induced impacts* that occur as the spending represented by the direct and indirect impacts propagates through the economy.

This study does not analyze a shutdown scenario for Grizzly Athletics – e.g., where existing buildings, facilities and other assets are sold or used for other purposes. Rather, we compare the economy as it is today to how it would be if Grizzly Athletics had never existed. In the noathletics scenario:

- No athletic teams exist, and student/athletes who were part of those teams attend other higher education institutions.
- Athletic events such as football and basketball games do not take place, and those who
  visit Missoula to attend those events stay home.
- The operations of the athletic department, which can be viewed as a spectator sports business with a \$22.9 million budget in academic year 2015, are no longer present in the economy.
- Construction and maintenance activities for athletic facilities does not take place.
- Any tax support for Grizzly Athletics is returned to taxpayers.

The data that were used to construct the hypothetical no-athletics scenario for the Missoula economy were drawn from a variety of sources:

- Operations data on the athletic department were obtained from administrative records, using the 2014-15 academic year as a baseline.
- A complete spending record for Grizzly Athletics was obtained from the purchase order records for 2014-15.
- A survey of football season ticket holders from outside Missoula was performed as part of this study to assess spending and other relevant information for football games.
- Zip code information from ticket sales was used to derive out-of-area attendance at football and basketball events.
- Previous BBER survey results on student spending at the University of Montana was used to estimate spending of student-athletes.

The construction of the no-athletics scenario as part of this study, places emphasis on athletic-related spending that comes from sources outside of Missoula. This includes ticket sales from out-of-area, spending by visitors from other areas and the spending of student-athletes. This spending is lost to the area economy if Grizzly Athletics did not exist. Spending by residents of Missoula connected to athletics and athletic events, in contrast, could be directed to other Missoula businesses and organizations in a no-athletics scenario.

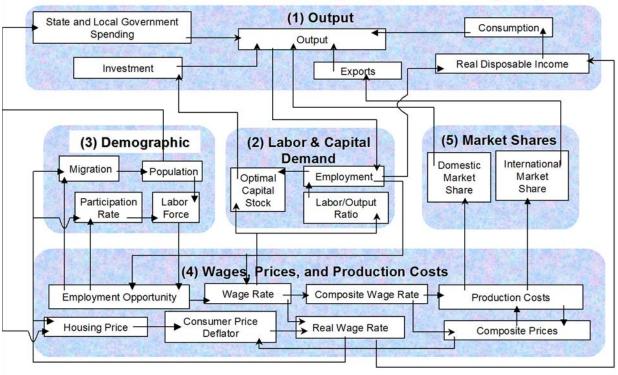
#### The REMI Model

The basic tool used in this study to assess the economic impacts of Grizzly Athletics is an economic model, calibrated to represent the interactions in the Montana economy, leased from Regional Economic Models, Inc. The REMI model is one of the best known and most respected analytical tools in the policy analysis arena and has been used in more than a hundred previous studies as well as dozens of peer-reviewed articles in scholarly journals. It is a state-of-the-art econometric forecasting model that incorporates dynamic feedbacks between economic and demographic variables. The REMI model forecasts employment, income, expenditures and populations for counties and regions based on a model containing over 100 stochastic and dynamic relationships as well as a number of identities. A full explanation of the design and operation of the model can be found in Treyz (1988).

Alternative Minus Baseline

The use of the model to derive the results of this study is illustrated graphically in Figure 2.1 above. First, a baseline projection of the economy is produced using the model, utilizing inputs and assumptions which extrapolate growth and conditions of recent history. The model is then used a second time, with identical inputs – except that in this alternative scenario, the spending, payroll, income and other flows associated with Grizzly Athletics are removed. Thus, the activities of athletics represent a change that ultimately produces a different economy, reflecting not only the operations themselves, but also how the rest of the economy reacts to those income flows. The difference between the baseline and alternative scenarios of the economy represents the economic impact of Grizzly Athletics.

# REMI Model Linkages (Excluding Economic Geography Linkages)



The operations of the model are a mathematical depiction of the flows and interactions of the regional economy, as illustrated above. At its heart is the relationship between the output of Grizzly Athletics and the demands that creates for goods and services elsewhere in the economy. These interactions combine to take the economy to a new resting point, where jobs, income and output increase by more than the activity of Grizzly Athletics itself.

# 3. Direct and Indirect Impacts of Grizzly Athletics

The thousands of football fans and their families who descend on Missoula on football Saturdays are just one of the more visible impacts that intercollegiate sports activities have on the local economy. The presence of Grizzly Athletics in Missoula represents a year-round concentration of economic activity that ultimately supports jobs, income, and revenues for households and businesses in the community.

In order to understand and quantify those economic contributions, it is necessary to identify, track, and quantify the interactions of athletics and athletic events with the local economy. In this section we describe those interactions in detail. This forms the basis for the "no athletics" scenario for the Missoula economy that allows us to estimate economic impacts.

#### **Grizzly Athletic Operations**

From the point of view of the economy, Grizzly Athletics can be characterized as an entity in the spectator sports business. Its payroll includes as "employees" the student-athletes who comprise the teams, whose compensation largely consists of athletic scholarships that defray the cost of college tuition and room and board. Revenues come from ticket and merchandise sales, advertising, student fees, donations and tax support.

BBER obtained operations data from Grizzly Athletics to the most recently completed UM fiscal year, 2014-15. Those data reveal that for that year:

- Grizzly Athletics had a total budget of \$22.9 million.
- Expenditures included \$6.6 million for employee compensation, as well as \$4.4 million in scholarships, fellowships and tuition waivers.
- Athletics devoted \$10.3 million in spending to vendors of products and services of all kinds, including facilities construction, transportation, accommodations, food, insurance and a wide variety of durable and nondurable goods.

BBER used financial data obtained from the purchasing orders and other records to exhaustively track and categorize all of the spending by UM Athletics over the 2014-15 fiscal year. Some of those purchases, such as those for air transportation or accommodations in distant cities, provide revenue to businesses outside of Missoula and have a minimal local impact. Others, such as building construction or health care services, have a high locally-produced component.

This distinction is important as we attempt to understand how the economy would look in the absence of Grizzly Athletics. Many Missoula businesses would see declines in sales in a no-athletics economy, and those losses would be reflected in their own employment and vendor spending levels. The REMI model, described in the previous section, incorporates the information on vendor spending to reflect this.

#### **Employment**

Grizzly Athletics directly employs 78 coaches, trainers, administrators and other individuals within the athletic department. As mentioned above, from the point of view of the economy, Grizzly Athletics employs many more individuals, including the student athletes, trainers, event staff, and food and beverage attendants, among others. To capture the full impact of athletics we treat these individuals as employees acting in the local economy. Their compensation can come in the form of scholarships for the student athletes or can be paid by another department in the university, such as dining services. Regardless, these individuals' positions and employment is made possible by the operations of Grizzly Athletics and would not exist otherwise.

#### **Visitor Spending**

Those who travel to Missoula to watch or participate in athletic events, or who accompany others who attend, also add to the jobs, income and business sales of the local economy. To assess this, BBER performed a mixed mode survey of non-local football season ticket holders during the 2015 football season. The data quality and the response rate for this survey were excellent. Respondents to the survey provided information on their athletic-related visits, including length of stay, and specific spending in different categories. BBER used this information to create a spending profile of football game-related visits.

The survey data allowed BBER for the first time to make a comprehensive, data-based estimate of visitor spending by those attending UM sports events in Missoula. Specifically, we considered three Grizzly Athletics sports: football, men's basketball and women's basketball. Zip code information from billing records of ticket sales was used to derive the total number of out-of-town attendees for these events. Combined with the survey-estimated spending profiles, total spending by visitors was then computed.

#### We found that:

- 168,975 attended Griz football games in 2015, with 90,067 being from outside Missoula (53.3%).
- Griz basketball attendance from out-of-area was 9,423, and Lady Griz was 8,250 for that same year.

- Total spending by non-residents attending those three sports was \$30.7 million, including air fare expenditures for those arriving by air.
- Spending per group for sporting event attendees is higher than the average for Montana tourists overall.
- Other visitors (e.g., visiting teams and officials) add to this total.

Table 3.1
Profile of Griz Football Visitor Spending

Category	Units	Impact
Group Size	Persons	2.7
Nights in Missoula	Nights	1.98
Spending per Group per Day	\$	\$200.60
Total Spending per game (excluding air fare)	\$ Millions	\$2.53

Spending is directed towards everything from groceries to auto repair. It is dominated, however, by accommodations, food and refreshments (both restaurants and groceries), retail goods and entertainment. The \$200.60 spending average per group per day for football visitors reported in Table 3.1 above does not include spending on football tickets, which are accounted for separately in the analysis. It is significantly higher than the \$149.29 average spending per group per day for all Montana visitors for 2015 as reported by the UM Institute for Tourism and Recreation Research.

We estimate that total spending by non-resident spectator groups during home games for three Grizzly sports – football, men's basketball and women's basketball – amounted to \$30.7 million in 2015. In addition to this spending, we estimate the spending by visiting teams and officials in all intercollegiate events in Missoula to be an additional \$700,000.

#### **Student-Athlete Spending**

Intercollegiate athletics is somewhat unique as a business activity in that members of teams are also university students. In the absence of athletics, these students would not live in Missoula. Thus their spending on everything from housing to merchandise is something that must be removed from the hypothetical no-athletics economy.

BBER made use of information from UM student spending surveys conducted from past projects to construct a spending profile for student-athletes. We estimate that the 343 varsity athletes at the University of Montana spent \$5.5 million for housing, food and other living expenses in Missoula in the year 2015. The categories and distribution of spending are assumed as the same as those of other UM students.

#### **Taxes and Subsidies**

Since Grizzly Athletics receives support from taxpayers and student fees, in a no-athletics scenario those who pay these costs today would have the money returned to them to spend on other things. These changes must take into account the interaction between federal and state income tax liabilities for those who itemize on their federal tax returns. This interaction primarily involves the deductibility of state taxes paid in computing federal adjusted gross income.

In the 2015 fiscal year ending June 30, 2015, support from Montana taxpayers allocated to Grizzly Athletics was approximately \$6.4 million. In the no-athletics scenario, state taxpayer liabilities are lowered by this amount. The impact of this on the Missoula economy is mitigated by two factors.

First, due to the fact that about 84 percent of Montana income taxes paid are claimed as a deduction on federal tax returns, the aggregate change in taxes paid (federal and state) from a reduction in \$6.4 million paid in Montana income taxes is approximately \$5.0 million. Secondly, Missoula personal income represents about 10 percent of the state's overall income. Thus, roughly 90 percent of the tax support for Grizzly Athletics, which is returned to taxpayers in the no-athletics scenario, comes from outside the local economy.

#### **Other Indirect Impacts**

The relationship between intercollegiate athletics and the educational institutions who participate is multi-faceted. Attendance at games and sporting events, media and advertising, and apparel sales associated with college and university sporting events are only the most visible connections between athletic activities and operations of the universities they represent.

It is apparent that athletics have a fundamental role in the marketing and branding of colleges and universities. In a no-athletics scenario for Grizzly Athletics, the impressions that millions of current and prospective students, parents, donors and supporters receive about the University of Montana – everything from the televised pictures of Washington Grizzly Stadium, to the stories about individual athletes – do not occur. Clearly, this would have an impact on operations of the University, including enrollment, donor giving and both alumni and general public support.

We have made no attempt to quantify the marketing and branding benefits of Grizzly Athletics to the University of Montana, and by extension, to the economy of Missoula. These benefits are doubtless substantial. Because of this, the impacts reported in this study are likely to be smaller than the actual impacts.

#### Summary

The first step in assessing the contribution of Grizzly Athletics to the Missoula economy is to examine its direct impacts – its own spending. With \$22.9 million dollars of expenditures in fiscal year 2013, from the point of view of the economy it can be thought of as a medium-sized business in the spectator sports industry. If Grizzly Athletics did not exist, then the following would not take place:

- \$6.6 million in employee compensation.
- \$4.4 million in scholarships, fellowships and tuition waivers.
- \$10.3 million in annual spending on construction, equipment, and other vendors.

There is also substantial spending that takes place that is connected with Grizzly athletics, but is carried out by others. These would also be lost to the Missoula economy if there were no intercollegiate athletics. These include:

- \$30.7 million per year in Missoula by non-resident visitor groups who attend home games to the three largest Grizzly Athletic sports.
- \$700,000 per year spent by visiting teams and officials in Missoula for all Grizzly Athletic home events.
- \$5.5 million per year spent year-round by student-athletes who are members of Grizzly Athletic teams.

We now turn to an analysis of how these spending flows ultimately support jobs and income in the Missoula economy.

# 4. The Economic Contribution of Grizzly Athletics

The existence of Grizzly Athletics in the Missoula economy is responsible for significant spending, income and employment in the local economy. Because those economic flows take place, the Missoula economy is different than it would be if Grizzly Athletics did not exist. As the wages, visitor spending, vendor purchases and tax payments made either directly by UM Athletics or in connection with its sporting events propagate through the rest of the economy, the size of the economy is increased. In this section we detail the findings of what those ultimate impacts are – how much larger the Missoula economy is today than it would have been if athletics were not such an important part of it.

The economic contribution of Grizzly Athletics represents the differences in two economic scenarios:

- (1) The status-quo scenario which represents the levels of economic activity that prevail today.
- (2) A no-athletics scenario, which removes the spending, job, and income that occur in the local economy because of athletics and then reconstructs with a model how the economy would look in their absence.

The results presented here are the difference between these two scenarios.

Table 4.1 Impacts Summary

Category	Units	Impact
Total Employment	Jobs	1,384
Personal Income	\$ Millions	52.8
Disposable Personal Income	\$ Millions	44.9
Output	\$ Millions	120.8
Population	People	1,334

#### **Summary of Findings**

The results of this research show that the Missoula economy is significantly impacted by the operations of Grizzly Athletics. We find that the presence of athletics results in the following added to Missoula County:

- 1,384 more jobs.
- \$120.8 million in output, or gross sales.
- \$52.8 million in personal income.
- 1,334 additional people.

The impacts are significantly larger than the direct contributions of Grizzly Athletics described in the previous section. This is due to the nature of a prominent collegiate athletics program, which brings significant numbers of visitors to Missoula, as well as adding students to the local population. In the non-athletics scenario, neither of these groups are present in the local economy and their spending on everything from accommodations to entertainment to food and beverages is absent.

These impacts are also larger in magnitude than athletics operations alone due to the propagation of spending through the local economy. Simply put, the additional spending shows up as income to local merchants and vendors, some portion of which is spent again in the community. These effects are captured using the economic model, which tracks the interrelationships in the area economy and produces an estimate of total impact.

#### **Employment Impacts**

The jobs in the Missoula economy that are ultimately supported by the presence of Grizzly Athletics can be found in a broad spectrum of industries. While the industry most affected is the arts, entertainment and recreation classification – which includes the spectator sports industry in which Grizzly Athletics itself is classified – there are significant gains in other industries.

The 116 jobs with retail trade industry employers come about in part through the spending of visitors to UM athletic events, as well as the vendor purchases made by Grizzly Athletics. But they also are induced through the overall growth in the economy that comes about because of athletic activities. The same can be said of the 152 jobs supported in the accommodations and food services (primarily restaurants) establishments in Missoula.

The connections between the presence of Grizzly Athletics and other, less clearly related sectors of the local economy are made clear from the employment impacts table. 85 permanent jobs for Missoula construction employers result from both the building and maintenance activities of athletics itself, as well as the indirect impacts of higher income and population. The increases in health care, professional services and other industry classification jobs, also illustrate the broadness of these employment impacts.

The increase in state and local government employment due to Grizzly Athletics are largely due to increases in the school-aged population and the increased demand for local public school workers. They also reflect population increases and increased tax capacity of the community.

Table 4.2 Employment Impacts

Industry	Impact
Construction	85
Retail Trade	116
Real Estate and Rental and Leasing	13
Professional and Technical Services	19
Health Care and Social Assistance	20
Arts, Entertainment and Recreation	886
Accommodation and Food Services	152
Other Private Employment	19
State and Local Government	76
TOTAL	1,384

#### **Personal Income Impacts**

Personal income is the payment (including cash and benefits) received by households who live in Missoula. This includes wage and salary income as well as income derived from assets. As can be seen in table 4.3, most of the contribution of Grizzly Athletics on Missoula personal income comes in the form of earnings. But significant contributions also come in the form of rental and financial income as well. These income flows are permanent and recur each year.

Of the \$52.8 million in increased annual income received by Missoulians, roughly \$36 million is in the form of earnings net of social security taxes. In this context, earnings includes benefits. Subtracting (primary federal) income taxes, this means Grizzly Athletics is responsible for nearly \$45 million of after-tax income to Missoula County residents, available for spending or any other use.

The personal income impacts reflect the fact that an economy with Grizzly Athletics is bigger, with more wages and more people. Thus, all forms of income are larger; even those that have no direct connection with intercollegiate athletic activities.

Table 4.3
Personal Income Impacts (\$ millions)

Category	Impact
Total Earnings by Place of Work	44.3
Total Wage and Salary Disbursements	30.2
Supplements to Wages and Salaries	7.0
Employer contributions for employee pension and insurance funds	4.4
Employer contributions for government social insurance	2.5
Proprietors' income with inventory valuation and capital consumption	
adjustments	5.6
Less: Contributions for government social insurance	5.4
Employee and self-employed contributions for government social insurance	2.9
Employer contributions for government social insurance	2.5
Plus: Adjustment for residence*	0.2
Gross In	0.4
Gross Out	0.2
Equals: Net earnings by place of residence	36.2
Plus: Rental, interest, and dividend income	9.6
Plus: Personal current transfer receipts	7.0
Equals: Personal Income	52.8
Less: Personal current taxes	7.9
Equals: Disposable personal income	44.9

<sup>\*</sup> Total earnings data are derived from records of employers who are located in Montana. Since some Montana workers are employed by out-of-state firms, and some Montana firms employ workers from other states, the adjustment for residence nets out these two impacts to produce an estimate of Montana resident's income.

#### **Output Impacts**

An alternative way of examining spending is to look at output, or gross sales, by type of business. Output in some industries has a higher local-produced component than others, such as accommodation and food services. The output impacts displayed in Table 4.4 represent the changes in gross sales for businesses located in Missoula that are due to the operations of Grizzly Athletics.

Table 4.4
Output Impacts, \$ Millions

a deposit imposito, y immessi		
Category	Impact	
Construction	10.7	
Wholesale Trade	10.5	
Retail Trade	42.3	
Real Estate and Rental and Leasing	3.4	
Professional, Scientific and Technical Services	2.7	
Administrative and Waste Management Services	0.9	
Health Care and Social Assistance	2.1	
Arts, Entertainment and Recreation	23.5	
Accommodation and Food Services	12.9	
Other Services, except Public Administration	0.6	
State and Local Government	8.1	
TOTAL	120.8	

As the table makes clear, the impacts of Grizzly Athletics extends beyond the scope of just spectator sports (a sub-industry of arts, entertainment, and recreation). While the output of this industry is significant, athletics boosts sales across many industries, and particularly in retail trade and accommodation and food services.

#### **Population**

The increased economic activity in Missoula as a result of Grizzly Athletics grows the local population by 1,334 individuals, almost 800 of which are working age adults. This results from the increased opportunities due to athletic operations, boosting the working-age population. As they have children and age, their presence in the economy creates demand for housing and services of all kinds. This is another important way in which the operations of Grizzly Athletics contribute to the local economy.

**Table 4.5 Population Impacts** 

Age Cohort	Population Increase	
Ages 0-14		345
Ages 15-24		158
Ages 25-64		786
Ages 65+		44
TOTAL		1,334

#### **Summary**

A comparison of the actual economy to an economy where Grizzly Athletics operations do not take place in Missoula shows that the local economy is larger and more prosperous with athletics. It contributes to a wide range of businesses, supports wages and increases the local population. Athletics attracts a significant number of visitors to Missoula annually, as well as bringing additional students and staff to the university. All of this spending would otherwise not propagate through the local economy.

# 5. Conclusion

Grizzly Athletics plays a major role at the University of Montana. It provides an opportunity for young athletes to both compete at a high level as well as earn a college degree. The University benefits from the high profile nature of college sports in media exposure, branding and visitor impressions. As detailed in this report, all of these activities benefit the Missoula economy.

Using an approach that compares the actual Missoula economy to what it would look like if Grizzly Athletics did not exist, we find that:

- Athletics both increases the student body as well as staff at the university, as well as hosting events drawing visitors from outside Missoula.
- The operations of athletics produce a total impact on the economy that is significantly larger than its own direct contribution.
- Grizzly Athletics supports permanent jobs and recurring income streams in the Missoula economy.

The conclusion of this report is that the operations of Grizzly Athletics provide a significant economic impact to Missoula resulting in a more prosperous local economy.

# 6. References

Regional Economic Modeling: A Systematic Approach to Economic Forecasting and Policy Analysis; George I. Treyz, 1993. Norwell: Kluwer Academic Publishers.

"Design of a Multiregional Policy Analysis Model," George I. Treyz, Journal of Regional Science, Volume 20, Issue 2, pp. 191-206, May 1980.

"The REMI Economic-Demographic Forecasting and Simulation Model," George I. Treyz, Dan S. Rickman, and Gang Shao, International Regional Science Review, Volume 14, pp. 221-253, December 1991.

# Appendix: REMI Tables

# The Economic Contribution of Grizzly Intercollegiate Athletics Economic Summary

Z:\EconomicData\Athletic Dept Impact\um athletics impact.rwb

UM Athletics compared to Standard Regional Control - Difference

Region = Northwestern

Economic Summary

Category	Units	2026
Total Employment	Thousands (Jobs)	+1.384
Private Non-Farm Employment	Thousands (Jobs)	+1.309
Residence Adjusted Employment	Thousands	+1.384
Population	Thousands	+1.334
Labor Force	Thousands	+0.889
Gross Domestic Product	Millions of Fixed (2015) [	+56.356
Output	Millions of Fixed (2015) [	+81.789
Value Added	Millions of Fixed (2015) [	+56.251
Personal Income	Millions of Fixed (2015) [	+52.779
Disposable Personal Income	Millions of Fixed (2015) [	+44.859
Real Disposable Personal Income	Millions of Fixed (2015) [	+39.409
PCE-Price Index	2009=100 (Nation)	+0.057

## The Economic Contribution of Grizzly Intercollegiate Athletics Employment | Industry | Private Non-Farm | Private Non-Farm Employment | Summary Level

Z:\EconomicData\Athletic Dept Impact\um athletics impact.rwb

UM Athletics compared to Standard Regional Control - Difference

Region = Northwestern

Summary Level

Category	Units	2026
Forestry and logging; Fishing, hunting, and	Thousands (Jobs)	-0.001
Agriculture and forestry support activities	Thousands (Jobs)	-0.002
Oil and gas extraction	Thousands (Jobs)	+0.000
Mining (except oil and gas)	Thousands (Jobs)	0.000
Support activities for mining	Thousands (Jobs)	+0.003
Utilities	Thousands (Jobs)	+0.001
Construction	Thousands (Jobs)	+0.085
Wood product manufacturing	Thousands (Jobs)	-0.001
Nonmetallic mineral product manufacturin	Thousands (Jobs)	+0.000
Primary metal manufacturing	Thousands (Jobs)	0.000
Fabricated metal product manufacturing	Thousands (Jobs)	0.000
Machinery manufacturing	Thousands (Jobs)	+0.000
Computer and electronic product manufac	Thousands (Jobs)	0.000
Electrical equipment and appliance manufa	Thousands (Jobs)	0.000
Motor vehicles, bodies and trailers, and pa	Thousands (Jobs)	+0.000
Other transportation equipment manufactu	Thousands (Jobs)	0.000
Furniture and related product manufacturing	Thousands (Jobs)	+0.001
Miscellaneous manufacturing	Thousands (Jobs)	0.000
Food manufacturing	Thousands (Jobs)	+0.000
Beverage and tobacco product manufactur	Thousands (Jobs)	+0.001
Textile mills; Textile product mills	Thousands (Jobs)	+0.000
Apparel manufacturing; Leather and allied	Thousands (Jobs)	0.000
Paper manufacturing	Thousands (Jobs)	0.000
Printing and related support activities	Thousands (Jobs)	+0.000
Petroleum and coal products manufacturin	Thousands (Jobs)	+0.000
Chemical manufacturing	Thousands (Jobs)	0.000
Plastics and rubber product manufacturing	Thousands (Jobs)	+0.000
Wholesale trade	Thousands (Jobs)	+0.002
Retail trade	Thousands (Jobs)	+0.116

# The Economic Contribution of Grizzly Intercollegiate Athletics Employment | Industry | Private Non-Farm | Private Non-Farm Employment | Summary Level

' ,	,	
Category	Units	2026
Air transportation	Thousands (Jobs)	+0.001
Rail transportation	Thousands (Jobs)	-0.001
Water transportation	Thousands (Jobs)	0.000
Truck transportation	Thousands (Jobs)	-0.002
Couriers and messengers	Thousands (Jobs)	0.000
Transit and ground passenger transportati	Thousands (Jobs)	+0.001
Pipeline transportation	Thousands (Jobs)	+0.000
Scenic and sightseeing transportation; Su	Thousands (Jobs)	+0.000
Warehousing and storage	Thousands (Jobs)	+0.000
Publishing industries, except Internet	Thousands (Jobs)	-0.001
Motion picture and sound recording indust	Thousands (Jobs)	-0.003
Internet publishing and broadcasting; ISP	Thousands (Jobs)	+0.000
Broadcasting, except Internet	Thousands (Jobs)	0.000
Telecommunications	Thousands (Jobs)	+0.000
Monetary authorities - central bank; Credi	Thousands (Jobs)	+0.002
Securities, commodity contracts, investme	Thousands (Jobs)	-0.002
Insurance carriers and related activities	Thousands (Jobs)	0.000
Real estate	Thousands (Jobs)	+0.012
Rental and leasing services; Lessors of no	Thousands (Jobs)	+0.001
Professional, scientific, and technical servi	Thousands (Jobs)	+0.019
Management of companies and enterprise	Thousands (Jobs)	0.000
Administrative and support services	Thousands (Jobs)	+0.008
Waste management and remediation serv	Thousands (Jobs)	+0.000
Educational services	Thousands (Jobs)	+0.006
Ambulatory health care services	Thousands (Jobs)	+0.012
Hospitals	Thousands (Jobs)	+0.000
Nursing and residential care facilities	Thousands (Jobs)	-0.001
Social assistance	Thousands (Jobs)	+0.009
Performing arts and spectator sports	Thousands (Jobs)	+0.883
Museums, historical sites, zoos, and parks	Thousands (Jobs)	0.000
Amusement, gambling, and recreation	Thousands (Jobs)	+0.003
Accommodation	Thousands (Jobs)	+0.055
Food services and drinking places	Thousands (Jobs)	+0.097

# The Economic Contribution of Grizzly Intercollegiate Athletics Employment | Industry | Private Non-Farm | Private Non-Farm Employment | Summary Level

Category	Units	2026
Repair and maintenance	Thousands (Jobs)	+0.002
Personal and laundry services	Thousands (Jobs)	+0.003
Membership associations and organization	Thousands (Jobs)	+0.001
Private households	Thousands (Jobs)	+0.000

# The Economic Contribution of Grizzly Intercollegiate Athletics Employment | Industry | Government

Z:\EconomicData\Athletic Dept Impact\um athletics impact.rwb

UM Athletics compared to Standard Regional Control — Difference

Region = Northwestern

Government

Category	Units	2026
State and Local	Thousands (Jobs)	+0.076
Federal Civilian	Thousands (Jobs)	0.000
Federal Military	Thousands (Jobs)	0.000

# The Economic Contribution of Grizzly Intercollegiate Athletics Personal Income

Z:\EconomicData\Athletic Dept Impact\um athletics impact.rwb

UM Athletics compared to Standard Regional Control — Difference

Region = Northwestern

Personal Income

Category	Units	2026
Total Earnings by Place of Work	Millions of Fixed (2015) [	+44.324
Total Wages and Salaries	Millions of Fixed (2015) [	+30.242
Supplements to Wages and Salaries	Millions of Fixed (2015) [	+6.970
Employer contributions for employee pe	Millions of Fixed (2015) [	+4.432
Employer contributions for government	Millions of Fixed (2015) [	+2.537
Proprietors' income with inventory valua	Millions of Fixed (2015) [	+5.639
Less: Contributions for Government Social	Millions of Fixed (2015) [	+5.426
Employee and Self-Employed Contribution	Millions of Fixed (2015) [	+2.889
Employer contributions for government se	Millions of Fixed (2015) [	+2.537
Plus: Adjustment for Residence	Millions of Fixed (2015) [	+0.212
Gross Inflow	Millions of Fixed (2015) [	+0.392
Gross Outflow	Millions of Fixed (2015) [	+0.180
Equals: Net Earnings by Place of Residence	Millions of Fixed (2015) [	+36.226
Plus: Property Income	Millions of Fixed (2015) [	+9.578
Personal Dividend Income	Millions of Fixed (2015) [	+3.686
Personal Interest Income	Millions of Fixed (2015) [	+3.844
Rental Income of Persons	Millions of Fixed (2015) [	+2.048
Plus: Personal Current Transfer Receipts	Millions of Fixed (2015) [	+6.975
Equals: Personal Income	Millions of Fixed (2015) [	+52.779
Less: Personal current taxes	Millions of Fixed (2015) [	+7.920
Equals: Disposable personal income	Millions of Fixed (2015) [	+44.859

### The Economic Contribution of Grizzly Intercollegiate Athletics Output and Demand | Output | Private Non-Farm | Summary Level

Z:\EconomicData\Athletic Dept Impact\um athletics impact.rwb

UM Athletics compared to Standard Regional Control — Difference

Region = Northwestern

Summary Level

Category	Units	2026
Forestry and logging; Fishing, hunting, and	Millions of Fixed (2015) [	-0.186
Agriculture and forestry support activities	Millions of Fixed (2015) [	-0.041
Oil and gas extraction	Millions of Fixed (2015) [	+0.032
Mining (except oil and gas)	Millions of Fixed (2015) [	+0.026
Support activities for mining	Millions of Fixed (2015) [	+0.226
Utilities	Millions of Fixed (2015) [	+0.803
Construction	Millions of Fixed (2015) [	+10.736
Wood product manufacturing	Millions of Fixed (2015) [	-0.248
Nonmetallic mineral product manufacturin	Millions of Fixed (2015) [	+0.087
Primary metal manufacturing	Millions of Fixed (2015) [	-0.001
Fabricated metal product manufacturing	Millions of Fixed (2015) [	-0.019
Machinery manufacturing	Millions of Fixed (2015) [	+0.116
Computer and electronic product manufac	Millions of Fixed (2015) [	-0.155
Electrical equipment and appliance manufa	Millions of Fixed (2015) [	-0.004
Motor vehicles, bodies and trailers, and pa	Millions of Fixed (2015) [	+0.124
Other transportation equipment manufacti	Millions of Fixed (2015) [	-0.004
Furniture and related product manufacturing	Millions of Fixed (2015) [	+0.163
Miscellaneous manufacturing	Millions of Fixed (2015) [	-0.066
Food manufacturing	Millions of Fixed (2015) [	+0.125
Beverage and tobacco product manufactur	Millions of Fixed (2015) [	+0.781
Textile mills; Textile product mills	Millions of Fixed (2015) [	+0.003
Apparel manufacturing; Leather and allied	Millions of Fixed (2015) [	-0.013
Paper manufacturing	Millions of Fixed (2015) [	0.000
Printing and related support activities	Millions of Fixed (2015) [	+0.023
Petroleum and coal products manufacturin	Millions of Fixed (2015) [	+0.056
Chemical manufacturing	Millions of Fixed (2015) [	-0.043
Plastics and rubber product manufacturing	Millions of Fixed (2015) [	+0.045
Wholesale trade	Millions of Fixed (2015) [	+1.045
Retail trade	Millions of Fixed (2015) [	+12.704

# The Economic Contribution of Grizzly Intercollegiate Athletics Output and Demand | Output | Private Non-Farm | Summary Level

	•	,
Category	Units	2026
Air transportation	Millions of Fixed (2015) [	+0.352
Rail transportation	Millions of Fixed (2015) [	-0.348
Water transportation	Millions of Fixed (2015) [	0.000
Truck transportation	Millions of Fixed (2015) [	-0.270
Couriers and messengers	Millions of Fixed (2015) [	-0.079
Transit and ground passenger transportati	Millions of Fixed (2015) [	+0.072
Pipeline transportation	Millions of Fixed (2015) [	+0.004
Scenic and sightseeing transportation; Su	Millions of Fixed (2015) [	+0.068
Warehousing and storage	Millions of Fixed (2015) [	+0.004
Publishing industries, except Internet	Millions of Fixed (2015) [	-0.098
Motion picture and sound recording indust	Millions of Fixed (2015) [	-0.122
Internet publishing and broadcasting; ISP	Millions of Fixed (2015) [	+0.172
Broadcasting, except Internet	Millions of Fixed (2015) [	+0.077
Telecommunications	Millions of Fixed (2015) [	+0.451
Monetary authorities - central bank; Credi	Millions of Fixed (2015) [	+0.820
Securities, commodity contracts, investme	Millions of Fixed (2015) [	-0.168
Insurance carriers and related activities	Millions of Fixed (2015) [	+0.124
Real estate	Millions of Fixed (2015) [	+2.661
Rental and leasing services; Lessors of no	Millions of Fixed (2015) [	+0.689
Professional, scientific, and technical servi	Millions of Fixed (2015) [	+2.655
Management of companies and enterprise	Millions of Fixed (2015) [	+0.013
Administrative and support services	Millions of Fixed (2015) [	+0.771
Waste management and remediation serv	Millions of Fixed (2015) [	+0.080
Educational services	Millions of Fixed (2015) [	+0.313
Ambulatory health care services	Millions of Fixed (2015) [	+1.584
Hospitals	Millions of Fixed (2015) [	+0.216
Nursing and residential care facilities	Millions of Fixed (2015) [	-0.055
Social assistance	Millions of Fixed (2015) [	+0.389
Performing arts and spectator sports	Millions of Fixed (2015) [	+23.148
Museums, historical sites, zoos, and parks	Millions of Fixed (2015) [	-0.008
Amusement, gambling, and recreation	Millions of Fixed (2015) [	+0.378
Accommodation	Millions of Fixed (2015) [	+6.570
Food services and drinking places	Millions of Fixed (2015) [	+6.333

# The Economic Contribution of Grizzly Intercollegiate Athletics Output and Demand | Output | Private Non-Farm | Summary Level

Category	Units	2026
Repair and maintenance	Millions of Fixed (2015) [	+0.304
Personal and laundry services	Millions of Fixed (2015) [	+0.116
Membership associations and organization	Millions of Fixed (2015) [	+0.163
Private households	Millions of Fixed (2015) [	+0.005

# The Economic Contribution of Grizzly Intercollegiate Athletics Compensation and Earnings | Private Non-Farm | Wages and Salaries | Summary Level

Z:\EconomicData\Athletic Dept Impact\um athletics impact.rwb

UM Athletics compared to Standard Regional Control — Difference

Region = Northwestern

Summary Level

Category Units 2026 Forestry and logging; Fishing, hunting, and Millions of Fixed (2015) [ +0.005 Agriculture and forestry support activities Millions of Fixed (2015) [ +0.001 Mining (except oil and gas) Millions of Fixed (2015) [ +0.005 Support activities for mining Millions of Fixed (2015) [ +0.068 Utilities Millions of Fixed (2015) [ +0.011 Construction Millions of Fixed (2015) [ +0.012 Wood product manufacturing Millions of Fixed (2015) [ +0.092 Nonmetallic mineral product manufacturin Millions of Fixed (2015) [ +0.002 Primary metal manufacturing Millions of Fixed (2015) [ +0.003 Fabricated metal product manufacturing Millions of Fixed (2015) [ +0.005 Fabricated metal product manufacturing Millions of Fixed (2015) [ +0.005 Computer and electronic product manufac Millions of Fixed (2015) [ +0.005 Computer and electronic product manufac Millions of Fixed (2015) [ +0.005 Electrical equipment and appliance manufa Millions of Fixed (2015) [ +0.001 Motor vehicles, bodies and trailers, and pa Millions of Fixed (2015) [ +0.001 Other transportation equipment manufacturin Millions of Fixed (2015) [ +0.002 Furniture and related product manufacturin Millions of Fixed (2015) [ +0.002 Furniture and related product manufacturin Millions of Fixed (2015) [ +0.002 Beverage and tobacco product manufacturi Millions of Fixed (2015) [ +0.003 Reverage and tobacco product manufacturi Millions of Fixed (2015) [ +0.003 Apparel manufacturing Millions of Fixed (2015) [ +0.002 Paper manufacturing Millions			
Agriculture and forestry support activities Millions of Fixed (2015) [ +0.032 Oil and gas extraction Millions of Fixed (2015) [ +0.001 Mining (except oil and gas) Millions of Fixed (2015) [ +0.050 Support activities for mining Millions of Fixed (2015) [ +0.068 Utilities Millions of Fixed (2015) [ +0.110 Construction Millions of Fixed (2015) [ +0.110 Wood product manufacturing Millions of Fixed (2015) [ +0.092 Nonmetallic mineral product manufacturin Millions of Fixed (2015) [ +0.091 Primary metal manufacturing Millions of Fixed (2015) [ +0.003 Fabricated metal product manufacturing Millions of Fixed (2015) [ +0.045 Machinery manufacturing Millions of Fixed (2015) [ +0.057 Computer and electronic product manufac Millions of Fixed (2015) [ +0.009 Electrical equipment and appliance manufac Millions of Fixed (2015) [ +0.001 Motor vehicles, bodies and trailers, and pa Millions of Fixed (2015) [ +0.001 Other transportation equipment manufacturin Millions of Fixed (2015) [ +0.002 Furniture and related product manufacturin Millions of Fixed (2015) [ +0.002 Furniture and related product manufacturin Millions of Fixed (2015) [ +0.033 Food manufacturing Millions of Fixed (2015) [ +0.035 Textile mills; Textile product mills Millions of Fixed (2015) [ +0.001 Apparel manufacturing Millions of Fixed (2015) [ +0.001 Paper manufacturing Mi	Category	Units	2026
Oil and gas extraction Millions of Fixed (2015) [ +0.001 Mining (except oil and gas) Millions of Fixed (2015) [ +0.050 Support activities for mining Millions of Fixed (2015) [ +0.068 Utilities Millions of Fixed (2015) [ +0.110 Construction Millions of Fixed (2015) [ +0.110 Wood product manufacturing Millions of Fixed (2015) [ +0.092 Nonmetallic mineral product manufacturin Millions of Fixed (2015) [ +0.021 Primary metal manufacturing Millions of Fixed (2015) [ +0.003 Fabricated metal product manufacturing Millions of Fixed (2015) [ +0.045 Machinery manufacturing Millions of Fixed (2015) [ +0.057 Computer and electronic product manufac Millions of Fixed (2015) [ +0.009 Electrical equipment and appliance manufac Millions of Fixed (2015) [ +0.001 Motor vehicles, bodies and trailers, and pa Millions of Fixed (2015) [ +0.001 Other transportation equipment manufaction Millions of Fixed (2015) [ +0.002 Furniture and related product manufacturin Millions of Fixed (2015) [ +0.042 Miscellaneous manufacturing Millions of Fixed (2015) [ +0.042 Miscellaneous manufacturing Millions of Fixed (2015) [ +0.033 Food manufacturing Millions of Fixed (2015) [ +0.035 Textile mills; Textile product mills Millions of Fixed (2015) [ +0.001 Apparel manufacturing; Leather and allied Millions of Fixed (2015) [ +0.001 Paper manufacturing Millions of Fixed (2015) [ +0.001 Paper manufacturing Millions of Fixed (2015) [ +0.000 Printing and related support activities Millions of Fixed (2015) [ +0.001 Petroleum and coal products manufacturing Millions of Fixed (2015) [ +0.001 Petroleum and coal products manufacturing Millions of Fixed (2015) [ +0.001 Petroleum and coal products manufacturing Millions of Fixed (2015) [ +0.001 Petroleum and coal products manufacturing Millions of Fixed (2015) [ +0.001 Petroleum and coal products manufacturing Millions of Fixed (2015) [ +0.001 Petroleum and coal products manufacturing Millions of Fixed (2015) [ +0.001 Petroleum and coal products manufacturing Millions of Fixed (2015) [ +0.001 Petroleum and coal pro	Forestry and logging; Fishing, hunting, and	Millions of Fixed (2015) [	+0.005
Mining (except oil and gas)  Millions of Fixed (2015) [ +0.050 Support activities for mining Millions of Fixed (2015) [ +0.068 Utilities Millions of Fixed (2015) [ +0.110 Construction Millions of Fixed (2015) [ +0.092 Nonmetallic mineral product manufacturin Millions of Fixed (2015) [ +0.092 Nonmetallic mineral product manufacturin Millions of Fixed (2015) [ +0.003 Fabricated metal product manufacturing Millions of Fixed (2015) [ +0.003 Fabricated metal product manufacturing Millions of Fixed (2015) [ +0.057 Computer and electronic product manufac Millions of Fixed (2015) [ +0.0057 Computer and electronic product manufac Millions of Fixed (2015) [ +0.001 Motor vehicles, bodies and trailers, and pa Millions of Fixed (2015) [ +0.001 Other transportation equipment manufacti Millions of Fixed (2015) [ +0.002 Furniture and related product manufacturin Millions of Fixed (2015) [ +0.002 Furniture and related product manufacturin Millions of Fixed (2015) [ +0.002 Miscellaneous manufacturing Millions of Fixed (2015) [ +0.033 Food manufacturing Millions of Fixed (2015) [ +0.036 Beverage and tobacco product manufactur Millions of Fixed (2015) [ +0.035 Textile mills; Textile product mills Millions of Fixed (2015) [ +0.001 Apparel manufacturing; Leather and allied Millions of Fixed (2015) [ +0.001 Paper manufacturing Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.000 Printing and related support activities Millions of Fixed (2015) [ +0.001 Plastics and rubber product manufacturing Millions of Fixed (2015) [ +0.001	Agriculture and forestry support activities	Millions of Fixed (2015) [	+0.032
Support activities for mining Millions of Fixed (2015) [ +0.068 Utilities Millions of Fixed (2015) [ +0.110 Construction Millions of Fixed (2015) [ +3.319 Wood product manufacturing Millions of Fixed (2015) [ +0.092 Nonmetallic mineral product manufacturin Millions of Fixed (2015) [ +0.021 Primary metal manufacturing Millions of Fixed (2015) [ +0.003 Fabricated metal product manufacturing Millions of Fixed (2015) [ +0.045 Machinery manufacturing Millions of Fixed (2015) [ +0.057 Computer and electronic product manufac Millions of Fixed (2015) [ +0.007 Electrical equipment and appliance manufa Millions of Fixed (2015) [ +0.001 Motor vehicles, bodies and trailers, and pa Millions of Fixed (2015) [ +0.010 Other transportation equipment manufacti Millions of Fixed (2015) [ +0.002 Furniture and related product manufacturi Millions of Fixed (2015) [ +0.002 Furniture and related product manufacturi Millions of Fixed (2015) [ +0.002 Miscellaneous manufacturing Millions of Fixed (2015) [ +0.033 Food manufacturing Millions of Fixed (2015) [ +0.035 Textile mills; Textile product mills Millions of Fixed (2015) [ +0.001 Apparel manufacturing; Leather and allied Millions of Fixed (2015) [ +0.001 Paper manufacturing Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001	Oil and gas extraction	Millions of Fixed (2015) [	+0.001
Utilities Millions of Fixed (2015) [ +0.110 Construction Millions of Fixed (2015) [ +3.319 Wood product manufacturing Millions of Fixed (2015) [ +0.092 Nonmetallic mineral product manufacturin Millions of Fixed (2015) [ +0.021 Primary metal manufacturing Millions of Fixed (2015) [ +0.003 Fabricated metal product manufacturing Millions of Fixed (2015) [ +0.045 Machinery manufacturing Millions of Fixed (2015) [ +0.045 Machinery manufacturing Millions of Fixed (2015) [ +0.057 Computer and electronic product manufac Millions of Fixed (2015) [ +0.009 Electrical equipment and appliance manufa Millions of Fixed (2015) [ +0.001 Motor vehicles, bodies and trailers, and pa Millions of Fixed (2015) [ +0.010 Other transportation equipment manufacti Millions of Fixed (2015) [ +0.002 Furniture and related product manufacturi Millions of Fixed (2015) [ +0.042 Miscellaneous manufacturing Millions of Fixed (2015) [ +0.033 Food manufacturing Millions of Fixed (2015) [ +0.035 Textile mills; Textile product mills Millions of Fixed (2015) [ +0.001 Apparel manufacturing Millions of Fixed (2015) [ +0.001 Apparel manufacturing Millions of Fixed (2015) [ +0.001 Paper manufacturing Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001	Mining (except oil and gas)	Millions of Fixed (2015) [	+0.050
Construction Millions of Fixed (2015) [ +3.319 Wood product manufacturing Millions of Fixed (2015) [ +0.092 Nonmetallic mineral product manufacturin Millions of Fixed (2015) [ +0.021 Primary metal manufacturing Millions of Fixed (2015) [ +0.003 Fabricated metal product manufacturing Millions of Fixed (2015) [ +0.045 Machinery manufacturing Millions of Fixed (2015) [ +0.057 Computer and electronic product manufac Millions of Fixed (2015) [ -0.009 Electrical equipment and appliance manufa Millions of Fixed (2015) [ +0.001 Motor vehicles, bodies and trailers, and pa Millions of Fixed (2015) [ +0.010 Other transportation equipment manufacturi Millions of Fixed (2015) [ +0.002 Furniture and related product manufacturi Millions of Fixed (2015) [ +0.002 Furniture and related product manufacturi Millions of Fixed (2015) [ +0.033 Food manufacturing Millions of Fixed (2015) [ +0.036 Beverage and tobacco product manufactur Millions of Fixed (2015) [ +0.035 Textile mills; Textile product mills Millions of Fixed (2015) [ +0.001 Apparel manufacturing; Leather and allied Millions of Fixed (2015) [ +0.001 Paper manufacturing Millions of Fixed (2015) [ +0.002 Paper manufacturing Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Paper manufacturing Millions of Fixed (2015) [ +0.001 Plastics and rubber product manufacturing Millions of Fixed (2015) [ +0.011 Plastics and rubber product manufacturing Millions of Fixed (2015) [ +0.012 Millions of Fixed (2015) [ +0.012 Millions of Fixed (2015) [ +0.0521	Support activities for mining	Millions of Fixed (2015) [	+0.068
Wood product manufacturing Millions of Fixed (2015) [ +0.092 Nonmetallic mineral product manufacturin Millions of Fixed (2015) [ +0.021 Primary metal manufacturing Millions of Fixed (2015) [ +0.003 Fabricated metal product manufacturing Millions of Fixed (2015) [ +0.045 Machinery manufacturing Millions of Fixed (2015) [ +0.045 Machinery manufacturing Millions of Fixed (2015) [ +0.057 Computer and electronic product manufac Millions of Fixed (2015) [ +0.009 Electrical equipment and appliance manufa Millions of Fixed (2015) [ +0.001 Motor vehicles, bodies and trailers, and pa Millions of Fixed (2015) [ +0.010 Other transportation equipment manufactath Millions of Fixed (2015) [ +0.002 Furniture and related product manufacturin Millions of Fixed (2015) [ +0.042 Miscellaneous manufacturing Millions of Fixed (2015) [ +0.033 Food manufacturing Millions of Fixed (2015) [ +0.036 Beverage and tobacco product manufactur Millions of Fixed (2015) [ +0.035 Textile mills; Textile product mills Millions of Fixed (2015) [ +0.001 Apparel manufacturing; Leather and allied Millions of Fixed (2015) [ +0.000 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 House Millions of Fixed (2015) [ +0.001 House Millions of Fixed (2015) [ +0.001	Utilities	Millions of Fixed (2015) [	+0.110
Nonmetallic mineral product manufacturin Millions of Fixed (2015) [ +0.021 Primary metal manufacturing Millions of Fixed (2015) [ +0.003 Fabricated metal product manufacturing Millions of Fixed (2015) [ +0.045 Machinery manufacturing Millions of Fixed (2015) [ +0.057 Computer and electronic product manufac Millions of Fixed (2015) [ +0.009 Electrical equipment and appliance manufa Millions of Fixed (2015) [ +0.001 Motor vehicles, bodies and trailers, and pa Millions of Fixed (2015) [ +0.010 Other transportation equipment manufaction Millions of Fixed (2015) [ +0.002 Furniture and related product manufacturil Millions of Fixed (2015) [ +0.042 Miscellaneous manufacturing Millions of Fixed (2015) [ +0.033 Food manufacturing Millions of Fixed (2015) [ +0.035 Textile mills; Textile product mills Millions of Fixed (2015) [ +0.005 Apparel manufacturing; Leather and allied Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.000 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.001 Printing and related Support activities Millions of Fixed (2015) [ +0.001 Printing and related Support activities Millions of Fixed (2015) [ +0.001 Printing and related Support activities Millions of Fixed (2015) [ +0.001 Printing and related Support activities Millions of Fixed (2015) [ +0.001 Printing and related Sup	Construction	Millions of Fixed (2015) [	+3.319
Primary metal manufacturing Millions of Fixed (2015) [ +0.003 Fabricated metal product manufacturing Millions of Fixed (2015) [ +0.045 Machinery manufacturing Millions of Fixed (2015) [ +0.057 Computer and electronic product manufac Millions of Fixed (2015) [ +0.009 Electrical equipment and appliance manufa Millions of Fixed (2015) [ +0.001 Motor vehicles, bodies and trailers, and pa Millions of Fixed (2015) [ +0.010 Other transportation equipment manufacti Millions of Fixed (2015) [ +0.002 Furniture and related product manufacturi Millions of Fixed (2015) [ +0.042 Miscellaneous manufacturing Millions of Fixed (2015) [ +0.033 Food manufacturing Millions of Fixed (2015) [ +0.035 Textile mills; Textile product mills Millions of Fixed (2015) [ +0.001 Apparel manufacturing; Leather and allied Millions of Fixed (2015) [ +0.001 Printing and related support activities Millions of Fixed (2015) [ +0.000 Printing and related support activities Millions of Fixed (2015) [ +0.000 Chemical manufacturing Millions of Fixed (2015) [ +0.001 Plastics and rubber product manufacturing Millions of Fixed (2015) [ +0.001 Millions of Fixed (2015) [ +0.011 Plastics and rubber product manufacturing Millions of Fixed (2015) [ +0.012 Millions of Fixed (2015) [ +0.0521	Wood product manufacturing	Millions of Fixed (2015) [	+0.092
Fabricated metal product manufacturing Millions of Fixed (2015) [ +0.045 Machinery manufacturing Millions of Fixed (2015) [ +0.057 Computer and electronic product manufactorial Millions of Fixed (2015) [ -0.009 Electrical equipment and appliance manufa Millions of Fixed (2015) [ +0.001 Motor vehicles, bodies and trailers, and pa Millions of Fixed (2015) [ +0.010 Other transportation equipment manufactorial Millions of Fixed (2015) [ +0.002 Furniture and related product manufacturial Millions of Fixed (2015) [ +0.042 Miscellaneous manufacturing Millions of Fixed (2015) [ +0.033 Food manufacturing Millions of Fixed (2015) [ +0.026 Beverage and tobacco product manufactur Millions of Fixed (2015) [ +0.035 Textile mills; Textile product mills Millions of Fixed (2015) [ +0.001 Apparel manufacturing; Leather and allied Millions of Fixed (2015) [ +0.002 Paper manufacturing Millions of Fixed (2015) [ +0.002 Printing and related support activities Millions of Fixed (2015) [ +0.013 Petroleum and coal products manufacturin Millions of Fixed (2015) [ +0.010 Chemical manufacturing Millions of Fixed (2015) [ +0.011 Plastics and rubber product manufacturing Millions of Fixed (2015) [ +0.012 Wholesale trade Millions of Fixed (2015) [ +0.521	Nonmetallic mineral product manufacturin	Millions of Fixed (2015) [	+0.021
Machinery manufacturing  Millions of Fixed (2015) [ +0.057  Computer and electronic product manufact Millions of Fixed (2015) [ -0.009  Electrical equipment and appliance manufa Millions of Fixed (2015) [ +0.001  Motor vehicles, bodies and trailers, and pa Millions of Fixed (2015) [ +0.010  Other transportation equipment manufacti Millions of Fixed (2015) [ +0.002  Furniture and related product manufacturii Millions of Fixed (2015) [ +0.042  Miscellaneous manufacturing Millions of Fixed (2015) [ +0.033  Food manufacturing Millions of Fixed (2015) [ +0.035  Textile mills; Textile product manufacturi Millions of Fixed (2015) [ +0.035  Textile mills; Textile product mills Millions of Fixed (2015) [ +0.001  Apparel manufacturing; Leather and allied Millions of Fixed (2015) [ +0.002  Paper manufacturing Millions of Fixed (2015) [ +0.000  Printing and related support activities Millions of Fixed (2015) [ +0.013  Petroleum and coal products manufacturic Millions of Fixed (2015) [ +0.010  Chemical manufacturing Millions of Fixed (2015) [ +0.011  Plastics and rubber product manufacturing Millions of Fixed (2015) [ +0.012  Wholesale trade Millions of Fixed (2015) [ +0.0521	Primary metal manufacturing	Millions of Fixed (2015) [	+0.003
Computer and electronic product manufac Millions of Fixed (2015) [ -0.009 Electrical equipment and appliance manufa Millions of Fixed (2015) [ +0.001 Motor vehicles, bodies and trailers, and pa Millions of Fixed (2015) [ +0.010 Other transportation equipment manufact Millions of Fixed (2015) [ +0.002 Furniture and related product manufacturii Millions of Fixed (2015) [ +0.042 Miscellaneous manufacturing Millions of Fixed (2015) [ +0.033 Food manufacturing Millions of Fixed (2015) [ +0.036 Beverage and tobacco product manufacturing Millions of Fixed (2015) [ +0.035 Textile mills; Textile product mills Millions of Fixed (2015) [ +0.001 Apparel manufacturing; Leather and allied Millions of Fixed (2015) [ -0.002 Paper manufacturing Millions of Fixed (2015) [ +0.000 Printing and related support activities Millions of Fixed (2015) [ +0.001 Petroleum and coal products manufacturin Millions of Fixed (2015) [ +0.001 Plastics and rubber product manufacturing Millions of Fixed (2015) [ +0.001 Holions and rubber product manufacturing Millions of Fixed (2015) [ +0.011 Plastics and rubber product manufacturing Millions of Fixed (2015) [ +0.012 Millions of Fixed (2015) [ +0.0521	Fabricated metal product manufacturing	Millions of Fixed (2015) [	+0.045
Electrical equipment and appliance manufal Millions of Fixed (2015) [ +0.001 Motor vehicles, bodies and trailers, and partitions of Fixed (2015) [ +0.010 Other transportation equipment manufaction Millions of Fixed (2015) [ +0.002 Furniture and related product manufacturii Millions of Fixed (2015) [ +0.042 Miscellaneous manufacturing Millions of Fixed (2015) [ +0.033 Food manufacturing Millions of Fixed (2015) [ +0.036 Beverage and tobacco product manufacturing Millions of Fixed (2015) [ +0.035 Textile mills; Textile product mills Millions of Fixed (2015) [ +0.001 Apparel manufacturing; Leather and allied Millions of Fixed (2015) [ -0.002 Paper manufacturing Millions of Fixed (2015) [ +0.000 Printing and related support activities Millions of Fixed (2015) [ +0.013 Petroleum and coal products manufacturin Millions of Fixed (2015) [ +0.000 Chemical manufacturing Millions of Fixed (2015) [ +0.001 Holions and rubber product manufacturing Millions of Fixed (2015) [ +0.001 Holions and rubber product manufacturing Millions of Fixed (2015) [ +0.011 Holions and rubber product manufacturing Millions of Fixed (2015) [ +0.012 Millions of Fixed (2015) [ +0.0521 Holions and rubber product manufacturing Millions of Fixed (2015) [ +0.0521 Holions and rubber product manufacturing Millions of Fixed (2015) [ +0.0521 Holions and rubber product manufacturing Millions of Fixed (2015) [ +0.0521 Holions and rubber product manufacturing Millions of Fixed (2015) [ +0.0521 Holions and rubber product manufacturing Millions of Fixed (2015) [ +0.0521 Holions and rubber product manufacturing Millions of Fixed (2015) [ +0.0521 Holions and rubber product manufacturing Millions of Fixed (2015) [ +0.0521 Holions and rubber product manufacturing Millions and	Machinery manufacturing	Millions of Fixed (2015) [	+0.057
Motor vehicles, bodies and trailers, and pa Millions of Fixed (2015) [ +0.010 Other transportation equipment manufacti Millions of Fixed (2015) [ +0.002 Furniture and related product manufacturii Millions of Fixed (2015) [ +0.042 Miscellaneous manufacturing Millions of Fixed (2015) [ +0.033 Food manufacturing Millions of Fixed (2015) [ +0.026 Beverage and tobacco product manufacturii Millions of Fixed (2015) [ +0.035 Textile mills; Textile product mills Millions of Fixed (2015) [ +0.001 Apparel manufacturing; Leather and allied Millions of Fixed (2015) [ +0.002 Paper manufacturing Millions of Fixed (2015) [ +0.000 Printing and related support activities Millions of Fixed (2015) [ +0.013 Petroleum and coal products manufacturin Millions of Fixed (2015) [ +0.000 Chemical manufacturing Millions of Fixed (2015) [ +0.011 Plastics and rubber product manufacturing Millions of Fixed (2015) [ +0.012 Wholesale trade Millions of Fixed (2015) [ +0.521	Computer and electronic product manufac	Millions of Fixed (2015) [	-0.009
Other transportation equipment manufacti Millions of Fixed (2015) [ +0.002 Furniture and related product manufacturii Millions of Fixed (2015) [ +0.042 Miscellaneous manufacturing Millions of Fixed (2015) [ +0.033 Food manufacturing Millions of Fixed (2015) [ +0.026 Beverage and tobacco product manufactur Millions of Fixed (2015) [ +0.035 Textile mills; Textile product mills Millions of Fixed (2015) [ +0.001 Apparel manufacturing; Leather and allied Millions of Fixed (2015) [ -0.002 Paper manufacturing Millions of Fixed (2015) [ +0.000 Printing and related support activities Millions of Fixed (2015) [ +0.013 Petroleum and coal products manufacturin Millions of Fixed (2015) [ +0.000 Chemical manufacturing Millions of Fixed (2015) [ +0.011 Plastics and rubber product manufacturing Millions of Fixed (2015) [ +0.012 Wholesale trade Millions of Fixed (2015) [ +0.521	Electrical equipment and appliance manufa	Millions of Fixed (2015) [	+0.001
Furniture and related product manufacturii Millions of Fixed (2015) [ +0.042 Miscellaneous manufacturing Millions of Fixed (2015) [ +0.033 Food manufacturing Millions of Fixed (2015) [ +0.026 Beverage and tobacco product manufactur Millions of Fixed (2015) [ +0.035 Textile mills; Textile product mills Millions of Fixed (2015) [ +0.001 Apparel manufacturing; Leather and allied Millions of Fixed (2015) [ +0.002 Paper manufacturing Millions of Fixed (2015) [ +0.000 Printing and related support activities Millions of Fixed (2015) [ +0.013 Petroleum and coal products manufacturin Millions of Fixed (2015) [ +0.000 Chemical manufacturing Millions of Fixed (2015) [ +0.011 Plastics and rubber product manufacturing Millions of Fixed (2015) [ +0.012 Wholesale trade Millions of Fixed (2015) [ +0.521	Motor vehicles, bodies and trailers, and $\ensuremath{\text{pa}}$	Millions of Fixed (2015) [	+0.010
Miscellaneous manufacturing  Millions of Fixed (2015) [ +0.033  Food manufacturing  Millions of Fixed (2015) [ +0.026  Beverage and tobacco product manufactur  Millions of Fixed (2015) [ +0.035  Textile mills; Textile product mills  Millions of Fixed (2015) [ +0.001  Apparel manufacturing; Leather and allied  Millions of Fixed (2015) [ -0.002  Paper manufacturing  Millions of Fixed (2015) [ +0.000  Printing and related support activities  Millions of Fixed (2015) [ +0.001  Petroleum and coal products manufacturin  Millions of Fixed (2015) [ +0.000  Chemical manufacturing  Millions of Fixed (2015) [ +0.011  Plastics and rubber product manufacturinc  Millions of Fixed (2015) [ +0.012  Wholesale trade  Millions of Fixed (2015) [ +0.521	Other transportation equipment manufacti	Millions of Fixed (2015) [	+0.002
Food manufacturing Millions of Fixed (2015) [ +0.026 Beverage and tobacco product manufactur Millions of Fixed (2015) [ +0.035 Textile mills; Textile product mills Millions of Fixed (2015) [ +0.001 Apparel manufacturing; Leather and allied Millions of Fixed (2015) [ -0.002 Paper manufacturing Millions of Fixed (2015) [ +0.000 Printing and related support activities Millions of Fixed (2015) [ +0.013 Petroleum and coal products manufacturin Millions of Fixed (2015) [ +0.000 Chemical manufacturing Millions of Fixed (2015) [ +0.011 Plastics and rubber product manufacturing Millions of Fixed (2015) [ +0.012 Wholesale trade Millions of Fixed (2015) [ +0.521	Furniture and related product manufacturii	Millions of Fixed (2015) [	+0.042
Beverage and tobacco product manufactur Millions of Fixed (2015) [ +0.035 Textile mills; Textile product mills Millions of Fixed (2015) [ +0.001 Apparel manufacturing; Leather and allied Millions of Fixed (2015) [ -0.002 Paper manufacturing Millions of Fixed (2015) [ +0.000 Printing and related support activities Millions of Fixed (2015) [ +0.013 Petroleum and coal products manufacturin Millions of Fixed (2015) [ +0.000 Chemical manufacturing Millions of Fixed (2015) [ +0.011 Plastics and rubber product manufacturing Millions of Fixed (2015) [ +0.012 Wholesale trade Millions of Fixed (2015) [ +0.521	Miscellaneous manufacturing	Millions of Fixed (2015) [	+0.033
Textile mills; Textile product mills  Apparel manufacturing; Leather and allied Millions of Fixed (2015) [ -0.002  Paper manufacturing  Millions of Fixed (2015) [ +0.000  Printing and related support activities  Millions of Fixed (2015) [ +0.000  Petroleum and coal products manufacturin Millions of Fixed (2015) [ +0.000  Chemical manufacturing  Millions of Fixed (2015) [ +0.011  Plastics and rubber product manufacturing Millions of Fixed (2015) [ +0.012  Wholesale trade  Millions of Fixed (2015) [ +0.521	Food manufacturing	Millions of Fixed (2015) [	+0.026
Apparel manufacturing; Leather and allied Millions of Fixed (2015) [ -0.002 Paper manufacturing Millions of Fixed (2015) [ +0.000 Printing and related support activities Millions of Fixed (2015) [ +0.013 Petroleum and coal products manufacturin Millions of Fixed (2015) [ +0.000 Chemical manufacturing Millions of Fixed (2015) [ +0.011 Plastics and rubber product manufacturing Millions of Fixed (2015) [ +0.012 Wholesale trade Millions of Fixed (2015) [ +0.521	Beverage and tobacco product manufactur	Millions of Fixed (2015) [	+0.035
Paper manufacturing Millions of Fixed (2015) [ +0.000 Printing and related support activities Millions of Fixed (2015) [ +0.013 Petroleum and coal products manufacturin Millions of Fixed (2015) [ +0.000 Chemical manufacturing Millions of Fixed (2015) [ +0.011 Plastics and rubber product manufacturing Millions of Fixed (2015) [ +0.012 Wholesale trade Millions of Fixed (2015) [ +0.521	Textile mills; Textile product mills	Millions of Fixed (2015) [	+0.001
Printing and related support activities Millions of Fixed (2015) [ +0.013  Petroleum and coal products manufacturir Millions of Fixed (2015) [ +0.000  Chemical manufacturing Millions of Fixed (2015) [ +0.011  Plastics and rubber product manufacturing Millions of Fixed (2015) [ +0.012  Wholesale trade Millions of Fixed (2015) [ +0.521	Apparel manufacturing; Leather and allied	Millions of Fixed (2015) [	-0.002
Petroleum and coal products manufacturir Millions of Fixed (2015) [ +0.000 Chemical manufacturing Millions of Fixed (2015) [ +0.011 Plastics and rubber product manufacturing Millions of Fixed (2015) [ +0.012 Wholesale trade Millions of Fixed (2015) [ +0.521	Paper manufacturing	Millions of Fixed (2015) [	+0.000
Chemical manufacturing Millions of Fixed (2015) [ +0.011 Plastics and rubber product manufacturing Millions of Fixed (2015) [ +0.012 Wholesale trade Millions of Fixed (2015) [ +0.521	Printing and related support activities	Millions of Fixed (2015) [	+0.013
Plastics and rubber product manufacturing Millions of Fixed (2015) [ +0.012 Wholesale trade Millions of Fixed (2015) [ +0.521	Petroleum and coal products manufacturir	Millions of Fixed (2015) [	+0.000
Wholesale trade Millions of Fixed (2015) [ +0.521	Chemical manufacturing	Millions of Fixed (2015) [	+0.011
	Plastics and rubber product manufacturing	Millions of Fixed (2015) [	+0.012
Retail trade Millions of Fixed (2015) [ +4.260	Wholesale trade	Millions of Fixed (2015) [	+0.521
	Retail trade	Millions of Fixed (2015) [	+4.260

# The Economic Contribution of Grizzly Intercollegiate Athletics Compensation and Earnings | Private Non-Farm | Wages and Salaries | Summary Level

·		5
Category	Units	2026
Air transportation	Millions of Fixed (2015) [	+0.053
Rail transportation	Millions of Fixed (2015) [	+0.026
Water transportation	Millions of Fixed (2015) [	0.000
Truck transportation	Millions of Fixed (2015) [	+0.029
Couriers and messengers	Millions of Fixed (2015) [	+0.010
Transit and ground passenger transportati	Millions of Fixed (2015) [	+0.032
Pipeline transportation	Millions of Fixed (2015) [	+0.004
Scenic and sightseeing transportation; Su	Millions of Fixed (2015) [	+0.047
Warehousing and storage	Millions of Fixed (2015) [	+0.007
Publishing industries, except Internet	Millions of Fixed (2015) [	+0.027
Motion picture and sound recording indust	Millions of Fixed (2015) [	+0.039
Internet publishing and broadcasting; ISP	Millions of Fixed (2015) [	+0.054
Broadcasting, except Internet	Millions of Fixed (2015) [	+0.094
Telecommunications	Millions of Fixed (2015) [	+0.107
Monetary authorities - central bank; Credi	Millions of Fixed (2015) [	+0.349
Securities, commodity contracts, investme	Millions of Fixed (2015) [	+0.041
Insurance carriers and related activities	Millions of Fixed (2015) [	+0.289
Real estate	Millions of Fixed (2015) [	+0.152
Rental and leasing services; Lessors of no	Millions of Fixed (2015) [	+0.060
Professional, scientific, and technical servi	Millions of Fixed (2015) [	+1.579
Management of companies and enterprise	Millions of Fixed (2015) [	+0.090
Administrative and support services	Millions of Fixed (2015) [	+0.645
Waste management and remediation serv	Millions of Fixed (2015) [	+0.041
Educational services	Millions of Fixed (2015) [	+0.258
Ambulatory health care services	Millions of Fixed (2015) [	+1.011
Hospitals	Millions of Fixed (2015) [	+0.565
Nursing and residential care facilities	Millions of Fixed (2015) [	+0.099
Social assistance	Millions of Fixed (2015) [	+0.216
Performing arts and spectator sports	Millions of Fixed (2015) [	+5.380
Museums, historical sites, zoos, and parks	Millions of Fixed (2015) [	+0.003
Amusement, gambling, and recreation	Millions of Fixed (2015) [	+0.482
Accommodation	Millions of Fixed (2015) [	+1.509
Food services and drinking places	Millions of Fixed (2015) [	+2.014

# The Economic Contribution of Grizzly Intercollegiate Athletics Compensation and Earnings | Private Non-Farm | Wages and Salaries | Summary Level

Category	Units	2026
Repair and maintenance	Millions of Fixed (2015) [	+0.121
Personal and laundry services	Millions of Fixed (2015) [	+0.073
Membership associations and organization	Millions of Fixed (2015) [	+0.325
Private households	Millions of Fixed (2015) [	+0.025

### The Economic Contribution of Grizzly Intercollegiate Athletics Population | Four Age Groups | All Races

Z:\EconomicData\Athletic Dept Impact\um athletics impact.rwb

UM Athletics compared to Standard Regional Control — Difference

Region = Northwestern

All Races

Category	Units	2026
Ages 0-14	Thousands	+0.345
Ages 15-24	Thousands	+0.158
Ages 25-64	Thousands	+0.786
Ages 65+	Thousands	+0.044

# The Economic Contribution of Grizzly Intercollegiate Athletics Labor | Labor Force | All Races

Z:\EconomicData\Athletic Dept Impact\um athletics impact.rwb

UM Athletics compared to Standard Regional Control — Difference

Region = Northwestern

All Races

Category	Units	2026
Males	Thousands	+0.459
Females	Thousands	+0.430