



College of Business  
Center for Business  
and Economic Analysis

# The Economic Impact of the University of Wyoming

AUGUST 2024



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The Center for Business and Economic Analysis (CBEA) at the University of Wyoming (UWyo) supports the economic growth and diversification of Wyoming's economy through applied economic and business analytics for communities, industries, and entrepreneurs. The center was established in 2019 as a unit within the College of Business. CBEA is a member of the Association for University Business and Economic Research (AUBER).

## TEAM

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# Executive Summary

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The University of Wyoming (UW) is one of Wyoming's greatest assets. As Wyoming's land- grant and flagship university, and in every county across Wyoming, UW provides courses and degrees for those who can and who cannot come to Laramie; research that advances fundamental knowledge as well as applied, practical solutions to business, industry and government challenges; academic programming, workshops, and seminars; access to legal services, health services, and library databases; and a wide variety of other contributions to the full social, business, cultural, creative, and economic environment of our state. UW's staff, students, and faculty view themselves as partners with and contributing members of our communities across Wyoming. What UW does, in collaboration with our stakeholders around Wyoming, provides jobs, creates economic value, increases human capital and citizenship, and enhances the viability of communities for the long term. Through engagement with our communities, **UW is a powerful engine supporting the state's growth. UW also has a broader economic footprint that contributes in the long run, and more broadly, to aspects of value creation.**

In this report, we summarize the **economic impacts** that would not occur in Wyoming but for the university **and directly attributable to external funding coming to Wyoming and/or as a result of the university's varied and distinct activities.** These include direct expenditures by UW Athletics, UW employees, nonresident students and visitors, externally funded research support, spin-outs and startup businesses directly resulting from UW research, and UW alumni living and working in Wyoming.

Using the most conservative estimation methods and not including the impacts of UW alumni working in Wyoming, we find that **UW creates:**

- **Over \$720 million in value added to the economy of Wyoming annually**
- Nearly **14,700 jobs** annually
- Nearly **\$49,000 value added per job.**

In addition, we find that UW alumni living in the state make a significant impact on Wyoming's economy. Using a tool which is able to match around 50% of UW's alumni profiles, we find the estimated total earnings of UW alumni living in Wyoming is around \$394 million annually. These total earnings have total induced value-added impact of \$640 million to the Wyoming economy annually. If you only take into account the earnings premium, or the wage differential for having a bachelor's degree or higher, their total average earning differential is over \$92 million and their induced value added to the economy is around \$531 million annually. With this additional information on alumni earnings, **we estimate that the total economic impact of UW annually is between approximately \$1.25 billion and \$1.36 billion.**

# Introduction

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An economic impact study of any university answers one very specific question: If not for that university, what economic activity would not occur in the region? In our case, if UW – its alumni, operations and expenditures – suddenly was not here, what would the hole in the Wyoming economy be? State appropriations would be repurposed. Resident students would go to another state to study, or to another institution in the state. However, but for UW, UW alumni in the state would not contribute in the same way to Wyoming's economy. But for UW, nonresident students would not move to Wyoming, spend their tuition dollars and other expenditures here, live and work here. But for UW, grant funding supporting research would not come to Wyoming. But for UW, many of our personnel would likely not live (and spend their incomes) in Wyoming.

We focus on one year of UW's economic activity. In some cases, we will also highlight cumulative years of data when appropriate, but the headline analysis focuses only on FY 2023. We used the IMPLAN modeling software in most cases to analyze the impacts of UW's many activities across the state and below lay out each major area's impacts. We also use Lightcast Analyst in some cases; using that platform impacts are shown slightly differently but the platform works similarly to IMPLAN. In each section below, a summary table shows direct, indirect, and induced effects of UW's expenditures and activities. Put simply, **direct effects** are the jobs, income, and economic output directly attributable to UW and its activities. **Indirect effects** are supply chain impacts – the effects of UW purchasing goods and services from other industries. **Induced effects** are the re-spending response – as people are paid, either through UW or through the supply chain, that money becomes household income, which in turn is spent throughout the economy on housing, gas, groceries, and so on. The total economic impact is the sum of the direct, indirect, and induced effects.

The tables shown in sections below also break down these impacts by employment, labor income, value added, and output. For the given amount of expenditures made by UW in FY 2023, we show the number of jobs, income from those jobs, value added and output. Value added to the state's economy refers to UW's contribution to GDP. Output is the total increased spending in the state.

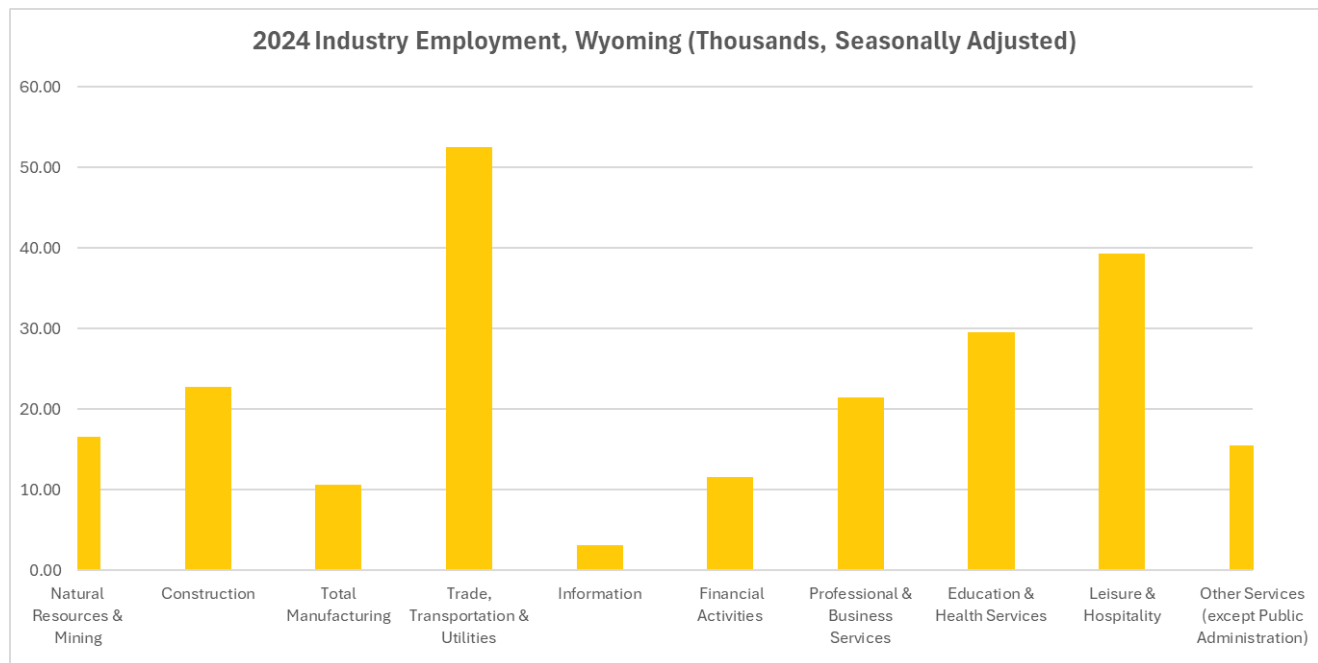
# Wyoming and UW Context

## OVERVIEW OF WYOMING ECONOMY

Wyoming's economy can be described as heavy industrial, with strong export dependence.

**Figure 1** below summarizes **industry employment** in Wyoming by high-level industry classifications.

*Figure 1: 2024 Industry Employment, Thousands of Persons, Seasonally Adjusted*



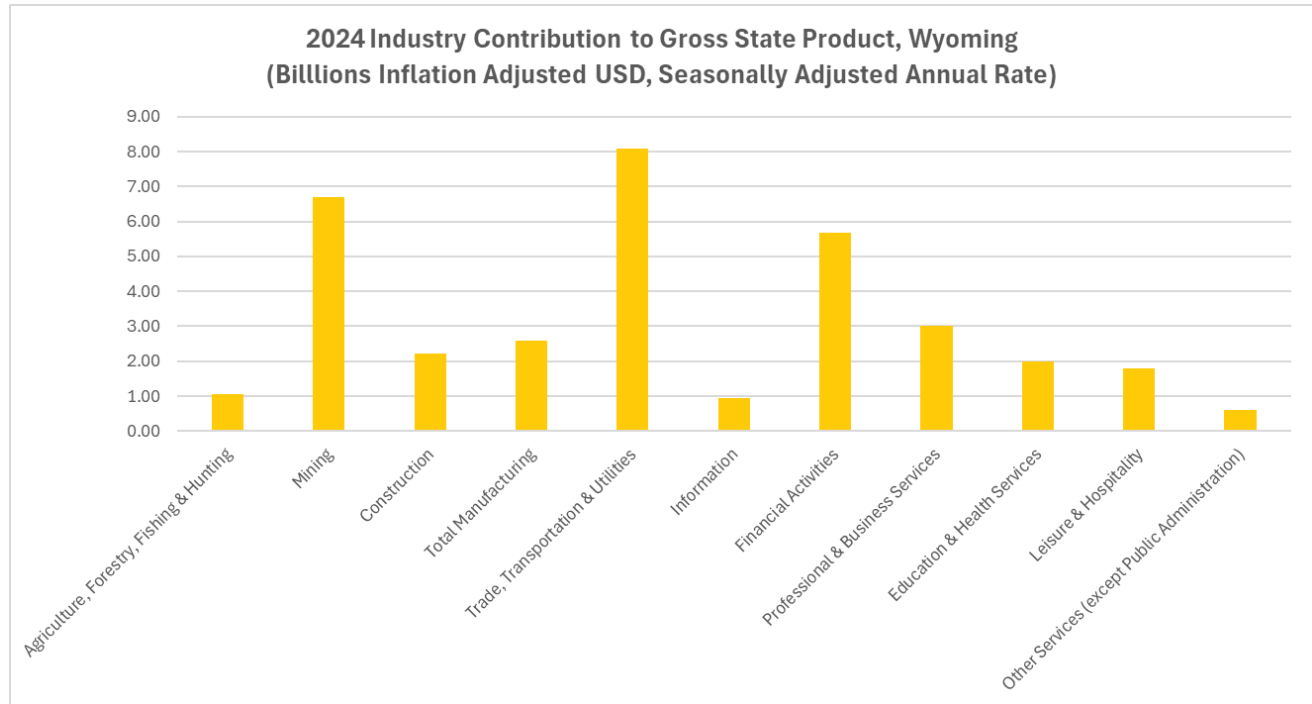
Source: U.S. Bureau of Labor Statistics (BLS); Moody's Analytics

In 2024, the largest private industry employer in Wyoming is Trade, Transportation, and Utilities (over 56,000 jobs), which includes wholesale trade, retail trade, transportation and warehousing, and utilities. Leisure and Hospitality (over 39,000 jobs) is the second largest private industry employer in Wyoming.

**Figure 2** below summarizes **contribution to Gross State Product (GSP)** by high-level industry classification.



**Figure 2: Industry Contribution to GSP**



Source: U.S. Bureau of Labor Statistics (BLS); Moody's Analytics

Again, Trade, Transportation and Utilities is the largest private industry contributor to GSP in 2024 to the state, contributing over \$8 billion in inflation-adjusted dollars to Wyoming's GSP; Mining contributes \$6.7 billion, while Financial Activities contributes around \$5.7 billion.

## OVERVIEW OF UW ACROSS THE STATE

A profile of **UW employment across Wyoming by county** is shown in **Table 1** below. UW has people working, living, and contributing their economies in every county across the state.

**Table 1: UW Employment by Wyoming County**

County	Total Employment	Total Salary Plus Benefits
Albany County	5,868	\$274,314,756
Big Horn County	21	\$423,459
Campbell County	53	\$815,446
Carbon County	21	\$740,093
Converse County	22	\$468,525
Crook County	9	\$195,358
Fremont County	69	\$2,116,392



Goshen County	29	\$769,436
Hot Springs County	7	\$471,116
Johnson County	15	\$278,778
Laramie County	365	\$14,248,634
Lincoln County	20	\$400,426
Natrona County	274	\$15,208,017
Niobrara County	6	\$175,058
Park County	78	\$2,296,189
Platte County	22	\$621,101
Sheridan County	76	\$1,931,974
Sublette County	20	\$312,659
Sweetwater County	56	\$1,059,308
Teton County	30	\$760,262
Uinta County	20	\$440,882
Washakie County	18	\$242,445
Weston County	8	\$338,357
<b>Total</b>	<b>7,107</b>	<b>\$318,628,670</b>

*Source: UW Office of Systems and Institutional Effectiveness*

## OVERVIEW OF UW STUDENT POPULATION

Students by degree-seeking level in Fall 2023 are summarized below in Table 2

**Table 2: UW Students by Degree Level, Fall 2023**

<b>Level</b>	<b>Headcount</b>
Non-degree Undergraduate	203
First-year	1,699
Sophomore	1,665
Junior	1,895
Senior	2,523
Second Bachelors	265
Graduate	2,136
Non-degree Graduate	109
Doctor of Nursing Practice (DNP)	52

Law	234
Medical (WWAMI and GME)	40
Pharmacy	92
<b>Total</b>	10,913

*Source: Office of Institutional Analysis*

## Economic Impacts of UW

### OVERALL IMPACT

An economic impact study of any university answers one very specific question: If not for that university, what economic activity would not occur in the region? In our case, if UW – its alumni, operations and expenditures – suddenly was not here, what would the hole in the Wyoming economy be? State appropriations would be repurposed. Resident students would go to another state to study, or to another institution in the state. However, but for UW, UW alumni in the state would not contribute in the same way to Wyoming’s economy. But for UW, nonresident students would not move to Wyoming, spend their tuition dollars and other expenditures here, live and work here. But for UW, grant funding supporting research would not come to Wyoming. But for UW, many of our personnel would likely not live (and spend their incomes) in Wyoming.

The tables shown in sections below also break down these impacts by employment, labor income, value added, and output. For the given amount of expenditures made by UW in FY 2023, we show the number of jobs, income from those jobs, value added and output. Value added to the state’s economy refers to UW’s contribution to GDP. Output is the total increased spending in the state.

The two tables directly below estimate UW’s annual impact on the Wyoming economy: the first table (**Table 3**) shows **total impacts without including UW’s Albany County employment** for reasons explained in the sections below. This table shows the most conservative estimate for UW’s impact. The second table (**Table 4**) **includes Albany County employment included** in the estimates. The total impacts are likely **somewhere in-between these two estimates**, as there are numerous Albany County personnel whose pay is funded by non-block grant funding.

*Table 3: Total Impacts of UW on Wyoming's Economy Without Albany County Payroll*

Impact	Employment	Labor Income	Value Added	Output
Direct	11,872	382,682,420	491,562,903	836,810,395
Indirect	1,569	66,412,021	117,155,351	295,501,728
Induced	1,258	54,543,500	111,213,108	207,508,617
<b>Total</b>	<b>14,700</b>	<b>503,637,941</b>	<b>719,931,362</b>	<b>\$1,339,820,740</b>

Source: Estimates by CBEA using IMPLAN

If we include the impacts of UW alumni working in Wyoming to this total, the total rises by an estimated **\$531 million - \$640 million** in value added.

*Table 4: Total Impacts of UW on Wyoming's Economy with Albany County Payroll Included*

Impact	Employment	Labor Income	Value Added	Output
Direct	16,495	659,870,962	851,221,104	1,303,659,752
Indirect	2,043	83,626,253	147,598,313	378,619,072
Induced	2,318	98,397,836	199,067,087	367,853,582
<b>Total</b>	<b>20,855</b>	<b>841,895,052</b>	<b>1,197,886,504</b>	<b>\$2,050,132,407</b>

Source: Estimates by CBEA using IMPLAN

## ATHLETICS

The impacts of **Athletics at UW** are summarized in **Table 5** below.

*Table 5: Athletics Impacts*

Impact	Employment	Labor Income	Value Added	Output
Direct	2.01	87,427	157,633	396,778
Indirect	1.04	43,405	76,247	176,096
Induced	0.36	15,623	31,962	59,553
<b>Total</b>	<b>3.41</b>	<b>146,455</b>	<b>265,843</b>	<b>\$632,426</b>

Source: Estimates by CBEA using IMPLAN

**UW Athletics' local spending** estimates are shown in **Table 6** below:

**Table 6: Athletics Local Spending Estimates, FY 2023**

<b>Local Spending</b>	<b>Category</b>
Athletic Equipment	\$70,000
Local Fuel	\$6,500
Equipment & Operations	\$40,000
Recruiting & Local Meals	\$350,000

Source: UW Athletics

The program also injects money into the Wyoming economy through visiting teams and overnight visitors. The University of Arizona recently estimated average spending patterns from various previous studies of university athletics event visitors, adjusted for Bureau of Labor Statistics CPI to 2022 levels. Their estimates are based on a meta-analysis of seven other studies across the country. For **overnight visitors and day visitors attracted by university athletics events**, their estimates are below in **Tables 7 and 8**.

**Table 7: Estimated Overnight Spending Pattern per Person per Night**

<b>Category</b>	<b>Average Per Person Per Night Spending</b>
Lodging/Accommodation	\$76
Retail Shopping	\$31
Food and Beverage	\$65
Transportation	\$25
Recreation/Entertainment	\$18
Other	\$16
<b>Total</b>	<b>\$230</b>

Source: Duval D., Montaña C., Bronstein J., Soderberg A., Frisvold G. *Visitor Impacts of Arizona Athletics Events* Cited author calculations using Duy (2012); Econsult Solutions Inc. (2023); Littlefield, et al (2022); Combrink et al (2018); Djaba et al (2021); Econsult Solutions Inc. (2015); Artigue et al (2007). All figures in 2022 dollars.

**Table 8: Estimated Day Visitor Spending Pattern Per Person Per Day**

<b>Category</b>	<b>Average Per Person Per Night Spending</b>
Lodging/Accommodation	\$0
Retail Shopping	\$17
Food and Beverage	\$32
Transportation	\$22
Recreation/Entertainment	\$12

Other	\$8
<b>Total</b>	<b>\$91</b>

*Source: Duval D., Montaña C., Bronstein J., Soderberg A., Frisvold G. Visitor Impacts of Arizona Athletics Events Cited author calculations using Duy (2012); Econsult Solutions Inc. (2023); Littlefield, et al (2022); Combrink et al (2018); Djaba et al (2021); Econsult Solutions Inc. (2015); Artigue et al (2007). All figures in 2022 dollars.*

## RESEARCH EXPENDITURES

UW's research enterprise contributes significantly to the state's economy. In FY 2023, UW's research expenditures were over \$150 million.

**Table 9** shows the overall economic **impacts of the research expenditures** of UW in FY 2023. Overall, the enterprise supports over 2,800 jobs, creating nearly \$90 million in labor outcome and adding over \$127 million in GDP to Wyoming and contributes over \$230 million in economic impact. Labor income is significant in this calculation because of intellectual capital involved in research.

*Table 9: Economic Impacts of UW Research Expenditures*

Impact	Employment	Labor Income	Value Added	Output
Direct	2,328	69,134,444	\$88,872,383	142,854,983
Indirect	264	10,541,830	\$19,415,511	51,235,809
Induced	218	9,483,909	\$19,400,016	36,137,809
<b>Total</b>	<b>2,810</b>	<b>89,160,183</b>	<b>\$127,687,911</b>	<b>230,228,602</b>

*Source: Estimates by CBEA using IMPLAN*

## CAPITAL PROJECTS EXPENDITURES

Capital projects at UW bring significant economic activity to Wyoming. In FY 2023, UW spent over \$73 million on capital projects, including fixtures, furnishings, equipment, maintenance and repairs, and engineering and design services, among other categories. **Table 10 summarizes the impacts of capital projects spending.**

*Table 10: Capital Projects Impacts*

Impact	Employment	Labor Income	Value Added	Output
Direct	384	23,034,732	\$28,950,077	62,387,203
Indirect	116	6,083,648	\$9,767,596	20,923,922
Induced	81	3,512,234	\$7,185,244	13,387,219
<b>Total</b>	<b>581</b>	<b>32,630,613</b>	<b>\$45,902,917</b>	<b>96,698,344</b>

*Source: Estimates by CBEA using IMPLAN*

Since monies for these capital projects often come from the State, this number overestimates the capital project impacts of UW's spending but is important to include given the volume of construction spending allocated to and executed by UW. To estimate the economic impact of alternative uses of this funding, we assume around \$60 million of these projects are state-funded. With a personal consumption rate of around 85%, if these funds were allocated instead to households, around \$51 million would be spent, creating around \$69 million in output and around 530 jobs. Thus, the net positive contribution using these more conservative assumptions is over \$15 million in output and 50 jobs supported by capital construction.

## IMPACTS OF EMPLOYEES IN ALL WYOMING COUNTIES EXCEPT ALBANY AND ECHW IMPACTS

Since a very large proportion of **non-Albany County payroll** is supported by external funding from numerous sources such as federal funding for UW Extension and UW Agricultural Research and Experiment (R&E) stations, the impacts of those payrolls are shown below in **Table 11**. This was calculated using payroll from counties other than Albany County.

*Table 11: Employee Payroll Impacts, All Wyoming Counties Other than Albany*

Impact	Employment	Labor Income	Value Added	Output
Direct	2,457	53,386,147	\$68,208,534	125,185,374
Indirect	274	10,801,262	\$19,241,116	50,960,702
Induced	193	8,258,377	\$16,591,315	31,347,564
<b>Total</b>	<b>2,924</b>	<b>72,445,786</b>	<b>\$104,040,965</b>	<b>207,493,639</b>

*Source: Estimates by CBEA using IMPLAN*

The Educational Health Center of Wyoming (EHCW), which includes clinics in Laramie, Cheyenne, and Casper, generates income through grants, collections, and the 340b drug pricing program. The total income of the clinics (FY 2024 data in this instance), which is used to support operations, is approximately \$20 million per year. The clinics had over 51,000 provider visits and nearly 62,000 total visits across all locations, with the bulk being in Casper and Cheyenne.

These two clinics also provide Graduate Medical Education (GME) residencies and fellowship programs. **Table 12** below summarizes the **economic impact of the clinics' activities**, not inclusive of the human capital creation they provide..

*Table 12: EHCW Impacts*

Impact	Earnings	Jobs
Direct	\$1,614,542	30
Indirect	\$410,959	8
Induced	\$3,331,329	74
<b>Total</b>	<b>\$5,356,830</b>	<b>113</b>

*Source: Estimates by CBEA using Lightcast Analyst*

## ALL EMPLOYEE PAYROLL IMPACTS

Including all employee payrolls across the state, the economic impact of UW's employment is shown in **Table 13** below. Because most employees outside of Albany County and some employees within Albany County are funded with non-block grant external funds, employee payroll impacts are likely somewhere between those shown in **Table 11** above and **Table 13** below.

**Table 13: All Employees Payroll Impacts**

Impact	Employment	Labor Income	Value Added	Output
Direct	7,079	\$330,574,689	\$427,866,735	592,034,731
Indirect	748	\$28,015,494	\$49,684,077	134,078,046
Induced	1,253	\$52,112,714	\$104,445,295	191,692,530
<b>Total</b>	<b>9,080</b>	<b>\$410,702,896</b>	<b>\$581,996,107</b>	<b>917,805,306</b>

Source: Estimates by CBEA using IMPLAN

## START-UP AND SPIN-OFF ACTIVITY

*Licensing and dividend income:* The university received around \$570,000 in licensing and dividend income in FY 2023. **Table 14** focuses on the jobs and earnings supported by this licensing and dividend income.

**Table 14: Licensing and Dividend Income impacts**

Impact	Earnings	Jobs
Direct	\$69,708	1
Indirect	\$25,624	1
Induced	\$99,287	2
<b>Total</b>	<b>\$194,620</b>	<b>4</b>

Source: Estimates by CBEA using Lightcast Analyst

*Invention Disclosures, Patents Filed and Granted:* In FY 2023, UW's technology transfer office facilitated 40 invention disclosures, 33 U.S. Patent application filed, and 17 granted U.S. Patents.

*New startups formed and active startups:* In FY 2023, UW saw one (1) new startup formed. The university has incubated nine (9) active startups and spinoffs, including several that have been acquired. In future iterations of this study, aggregated revenues from these businesses will be analyzed.



## STUDENT SPENDING

**Nonresident student spending** on tuition, fees, and campus housing also brings an injection of economic activity to Wyoming. The impacts for nonresident student spending, net of scholarships and financial aid, is shown in **Table 15** below.

*Table 15: Nonresident Student Spending Impacts*

Impact	Employment	Labor Income	Value Added	Output
Direct	150	\$9,022,092	\$11,706,362	15,195,281
Indirect	15	\$560,299	\$990,875	2,705,351
Induced	34	\$1,427,396	\$2,859,522	5,219,000
<b>Total</b>	<b>200</b>	<b>\$11,009,787</b>	<b>\$15,556,759</b>	<b>23,119,632</b>

*Source: Estimates by CBEA using IMPLAN*

## ALUMNI IMPACTS

A holistic analysis of UW alumni impacts on the Wyoming economy is provided by the Lightcast Alumni Pathways tool. The estimated total earnings of UW alumni living in Wyoming is around \$394 million annually. These total earnings have total induced value-added impact of \$640 million to the Wyoming economy annually. If only the earnings premium of UW alumni is used in the calculation – that is, the wage differential for having a Bachelors or higher - their total average earning differential is over \$92 million and their induced value added to the economy is around \$531 million annually.

## TAX IMPACTS

The **tax impact report below in Table 16** captures all tax revenue in Wyoming across all levels of government that UW creates. **Table 16** below summarizes the tax impacts of UW. The model captures the unique tax structure of Wyoming and UW's own tax-exempt status (taxes are paid by UW employees, vendors, and those who are indirect and induced impact recipients). Subcounty general tax impacts include local city/township impacts such as property taxes and special purpose taxes; subcounty special district impacts include fire, school, hospital, and other special districts; county tax impacts include any additional sales taxes imposed by counties and special purpose taxes; and state tax impacts include taxes such as sales and use taxes.

*Table 16: Tax Impacts of UW (Albany County payroll not included)*

Impact	Sub County General	Sub County Special District	County	State	Federal	Total
Direct	258,098	\$2,130,298	\$1,245,749	12,289,824	\$96,647,792	\$112,571,760
Indirect	131,402	\$1,070,451	\$603,391	4,736,037	\$17,349,140	\$23,890,421

Induced	255,050	\$2,015,038	\$1,127,024	8,407,004	\$15,322,988	\$27,127,103
<b>Total</b>	<b>644,550</b>	<b>\$5,215,787</b>	<b>\$2,976,164</b>	<b>25,432,864</b>	<b>\$129,319,919</b>	<b>\$163,589,284</b>

Source: Estimates by CBEA using Lightcast Analyst

## Investment Analysis

This investment analysis relies on data provided by the State of Wyoming Statewide Longitudinal Education Data System (SLEDs). It uses data from the 2019-2020 academic period, along with reported Cost of Education figures as reported by the University.

### STUDENT RETURN ON INVESTMENT

The student value of attending University consists of their lifetime increase in earnings after graduation less costs incurred to attend. This section utilizes the State of Wyoming Statewide Longitudinal Education Data System (SLEDs) dataset which contains earnings for graduates in the Fall 2019 – Summer 2020 term. In order to obtain an average cost of education for UW graduates between Fall 2019 and Summer 2020, the in-state and out-of-state cost of education figures for UW graduates during the four-year period starting from Fall 2016 to Fall 2019 can be weighted by the relative proportions of in-state and out-of-state students and then summed. The relative proportion of in-state and out-of-state students is determined by taking the percentage of students reported as in-state or out-of-state for these academic periods. This simple analysis does not account for other costs associated with attending University, such as opportunity costs of lost wages or the amount of money spent on student loans. According to the Office of Institutional Analysis, the total tuition and fees, in addition to room and board, over this five-year period and the reported in-state and out-of-state headcounts at the beginning of the fall semesters during the academic period are shown in **Table 17** below.

**Table 17: Weighted Cost of Education at UW**

Academic-Year	Undergraduate Resident Cost of Education	Undergraduate Non-Resident Cost of Education	% In-State	% Out-of-State	Weighted Cost of Education
2015-2016	\$14,929	\$25,669	63%	37%	\$18,856
2016-2017	\$15,375	\$26,535	63%	37%	\$19,538
2017-2018	\$15,537	\$27,147	62%	38%	\$19,920
2018-2019	\$15,720	\$27,810	61%	39%	\$20,479

Source: Estimates by CBEA using IMPLAN

Therefore, the typical student is expected to pay approximately \$78,792 to attend the University of Wyoming, assuming they will graduate in four years. Using the student earnings data from SLEDs, the average earnings for the 25th percentile of students who graduated with a bachelor's degree from Fall 2019 to Summer 2020

is \$31,564. Therefore, this group of students will break even on their investment in approximately 2.5 years. In looking at the 50th percentile of earners in this group of students, their average earnings per year are \$39,906. In this case, these students break even on their investment in approximately 1.97 years. Lastly, the 75th percentile of earners averaged \$48,247 per year. For this group of students, they will **break even on their investment** in approximately 1.63 years. These calculations are summarized in **Table 18** below.

**Table 18: Years to Break Even on UW Education in Wyoming**

Percentile of Earners	Years to Break Even on Investment in Education
25th	2.5
50th	1.97
75th	1.63

Source: Estimates by CBEA

## Wyoming Societal Value

**Earnings from obtaining a college or university degree in Wyoming** are estimated from the American Community Survey 5-Year Estimates Public Use Microdata Sample 2022, shown below in **Table 20**. This table shows the average annual earnings differential between various levels of education in Wyoming. The annual earnings premium for obtaining a postsecondary degree indicates that UW alumni provide a significant boost to their local economy when they remain in Wyoming.

**Table 20: Annual Earnings Premium for Postsecondary Education, Wyoming**

Educational Attainment	Total person's earnings	Annual Earnings Differential – Regular High School Diploma and...
Regular high school diploma	\$27,076	
GED or alternative credential	\$25,126	
Some college, but less than 1 year	\$25,898	
1 or more years of college credit, no degree	\$30,105	
Associate's degree	\$37,202	\$10,126
Bachelor's degree	\$43,365	\$16,289
Master's degree	\$50,137	\$23,061
Professional degree beyond a bachelor's degree	\$115,637	\$88,561
Doctorate degree	\$76,530.00	\$49,454

Source: American Community Survey

In addition to the earnings premium of postsecondary education, **other impacts, beneficial to society, rise as education increases.** Table 21 below summarizes the most recent 2023 Education Pays report from the College Board.

**Table 21: Societal Benefits of Education**

Measure	Less than High School Diploma	High School Diploma	Some College, No Degree	Associate's degree	Bachelor's Degree	Advanced Degree*	Year
Unemployment Rate	5.6%	4.0%	3.6%	2.8%	2.1%	2.1%	2022
Labor Force Participation Rate	59.8%	71.1%	75.5%	79.6%	85.4%	85.4%	2021
Full-Time Year Round Workers 25 or Older Offered Employer Retirement Plan, Private Sector	23%	38%	42%	46%	45%	47%	2021
Participation Rate in Employment-Provided Retirement Plan, Private Sector, Full-Time Year- Round Workers 25 or Older	79%	81%	83%	84%	89%	90%	2021
Employer-Provided Health Insurance Coverage Among Full-Time Year-Round Workers 25 or Older	34%	53%	57%	59%	66%	68%	2021
Employer-Provided Health Insurance Coverage Among Part-Time Year-Round Workers 25 or Older	18%	27%	30%	34%	38%	45%	2021
Percentage of Individuals 25 and Older Living in Households in Poverty	27%	13%	10%	8%	4%	4%	2021

Percentage of Individuals 25 and Older Living in Households that participated in Medicaid	48%	30%	24%	21%	11%	11%	2021
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Measure	Less than High School Diploma	High School Diploma	Some College, No Degree	Associate's degree	Bachelor's Degree	Advanced Degree*	Year
Percentage of Individuals 25 and Older Living in Households that participated in SNAP	27%	14%	12%	10%	3%	3%	2021
Percentage of Individuals 25 and Older Living in Households that participated in Housing Assistance	10%	5%	4%	3%	1%	1%	2021
Voting Rates Among U.S. Citizens During Presidential Elections	41%	55%	70%	70%	80%	80%	2020
Percentage of Individuals 25 and Older Who Volunteer	13%	19%	29%	33%	40%	51%	2019
Exercise Rates Among Individuals 25 and Older, Moderate/ Vigorous Intensity Level	32% Moderate, 15% Vigorous	39% Moderate, 19% Vigorous	40% Moderate, 27% Vigorous	41% Moderate, 27% Vigorous	40% Moderate, 42% Vigorous	40% Moderate, 42% Vigorous	2020

**\*When Bachelors and Advanced Degree numbers are identical, metric is calculated for “Bachelor’s degree or Higher”**

Source: College Board

## Conclusions and Limitations

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In this report, we summarize the **economic impacts because of the university's varied and distinct activities.**

Using the most conservative estimation methods and including only a rough estimate of the impacts of UW alumni working in Wyoming (more refined analysis of this is coming soon), we find that **UW creates, over \$720 million in value added to the economy of Wyoming annually**, nearly **14,700 jobs** annually, nearly **\$49,000 value added per job**, and **around \$213 million in Wyoming-based alumni impacts**. Additionally, an average UW student-turned- alumni working in Wyoming will see their financial investment pay off within between 1.63 and 2.5 years.

There are caveats and limitations to this study. In addition to the fact that alumni impacts are likely being underestimated (an addendum will be provided when the Lightcast Alumni Pathways tool is online), economic impact analysis should be interpreted with caution. A substantial amount of funding for UW comes from the State and could have alternative uses, so the capital construction impacts should be taken with caution. Some Athletics revenues come from residents of the state. However, it is clear that UW's impact on the state's economy is substantial.

# Appendix A

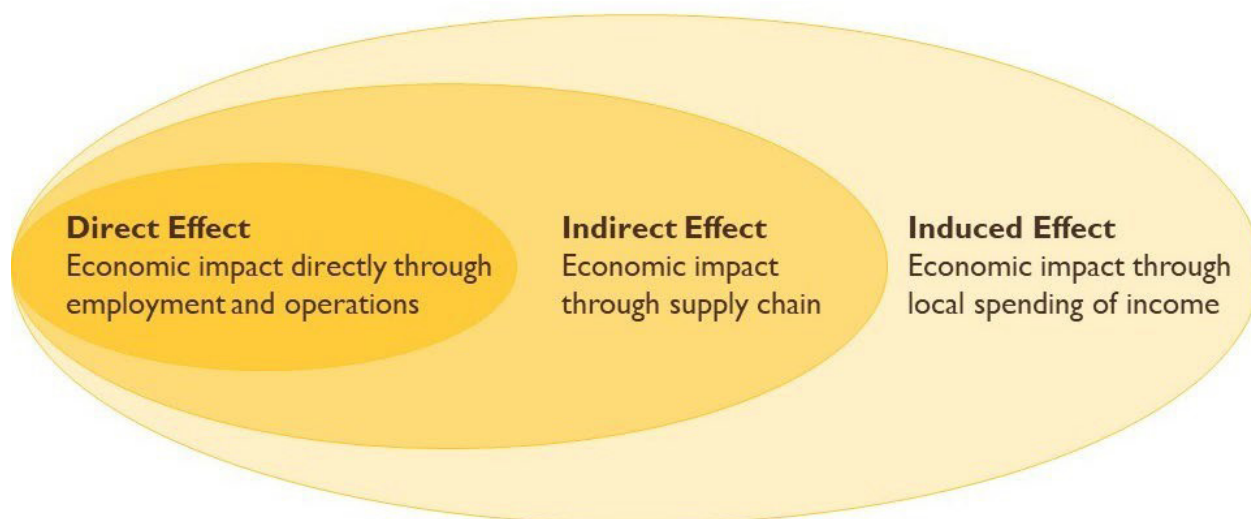
## *What is Economic Impact Analysis?*

Economic impact analyses are a widely accepted research approach used to better comprehend the effect of a new event or industry changes on local and state economies. These analyses typically use input-output methodologies to re-create inter-industry linkages and calculate the impact on a regional economy.

We used the Impact Analysis for PLANning (IMPLAN) (version 3.1) software package to conduct our analysis. This software package allows us to estimate the economic activity in terms of employment, labor income, value added (i.e., increase in the state's gross domestic product (GDP)), and total output (i.e., total economic impact to the state).

Modeling the economic impacts of this project requires the examination of three distinct types of effects. To illustrate, assume the project requires several construction jobs. These jobs, and their associated compensation and output, are what we refer to as the direct effect. Beyond this initial effect, there will also be an increase in the demand for intermediate goods needed in construction, e.g., steel. This is called the indirect effect. Further, the additional income of workers within the construction industry will lead to added economic activity in terms of buying goods and services, which, in turn, creates new economic activity in a region. In other words, individuals' spending will induce more spending, which we refer to as the induced effect. The total impact is the sum of direct, indirect, and induced effects, as illustrated in Figure A.1. In sum, an exogenous direct increase in economic activity, in a given geographic area, creates a ripple effect in the economy of that area. The totality of the ripple effect is what we refer to as the total impact. Tables A.1 and A.2 display lists of additional economic impact analysis terminology used in this report.

***Figure A.1. Total Economic Impact is the Sum of Direct, Indirect, and Induced Effects***





**Table A.1. Economic Impact Analysis Terminology**

Variable	Definition
Employment	Employment refers to an industry-specific mix of full-time, part-time, and seasonal jobs. Expressed as full-time equivalents (FTE).
Labor Income	Labor income refers to all forms of employment income, including employee compensation (i.e., wages, salaries, and benefits) and proprietor income.
Value Added	Value added is the difference between an industry's total output and the cost of its intermediate inputs; it is a measure of the contribution to GDP.
Output	Output is the value of production by industry in a calendar year. It can also be described as annual revenues plus net inventory change. It is often referred to as total economic impact.
Multipliers	Multipliers describe how, for a given change in a particular industry, a resulting change will occur in the overall economy. For instance, employment multipliers describe the total jobs generated as a result of one job in the target industry.

Economic impact analyses make some key assumptions about the industry and firm, as well as how the “ripple effects” of these changes reverberate throughout the economy. Below, in Table A.2, a brief outline of these assumptions and the resulting implications is provided.

**Table A.2. Economic Impact Analysis Assumptions**

Assumption	Description
Constant Returns to Scale	The quantity of inputs needed per unit of output does not change.
No Supply Constraints	Input-output methodology assumes that there are no restrictions to inputs, raw materials, or labor needed to produce an unlimited quantity of output.
Fixed Input Structure	Changes in the economy may impact the industry's level of output, but do not impact the mix of commodities and services the industry requires to produce that output.
Fixed Technology	The same technology is used to produce each of the industry's products.
Constant Byproduct Coefficients	This is required by the fixed technology assumption. An industry will produce the same mix of goods or services regardless of the level of production.
Static Model (does not model changes over time)	The model does not include price changes and general equilibrium effects are not accounted for.