



UNIVERSITY OF
NORTHERN
COLORADO

The Economic Value of the
University of Northern Colorado

EXECUTIVE SUMMARY



THE University of Northern Colorado (UNC) creates value in many ways. The university plays a key role in helping students increase their employability and achieve their individual potential. The university facilitates new research and company developments and also draws visitors and students to the region,* generating new dollars and opportunities for Larimer and Weld Counties. UNC provides students with the education, training, and skills they need to have fulfilling and prosperous careers. Furthermore, UNC is a place for students to meet new people, increase their self-confidence, and promote their overall health and well-being.

*The value of UNC influences both the **lives of its students** and the **regional economy**.*

UNC influences both the lives of its students and the regional economy. The university supports a variety of industries in Larimer and Weld Counties, serves regional businesses, and benefits society as a whole in Colorado from an expanded economy and improved quality of life. The benefits created by UNC even extend to the state and local government through increased tax revenues and public sector savings.

This study measures the economic impacts created by UNC on the business community and the benefits the university generates in return for the investments made by its key stakeholder groups—students, taxpayers, and society. The following two analyses are presented:



Economic impact analysis



Investment analysis

All results reflect employee, student, and financial data, provided by the university, for fiscal year (FY) 2017-18. Impacts on the Larimer and Weld economy are reported under the economic impact analysis and are measured in terms of added income. The returns on investment to students, taxpayers, and society in Colorado are reported under the investment analysis.

* The term region refers to the area comprised of Larimer and Weld Counties.



Economic impact analysis

IMPACTS CREATED
BY UNC IN FY 2017-18



UNC promotes economic growth in Larimer and Weld Counties through its direct expenditures and the resulting expenditures of visitors, students, and regional businesses. The university serves as an employer and buyer of goods and services for its day-to-day and research operations. Numerous spin-off companies have formed as a result of programs and knowledge at UNC. The university's reputation and activities attract visitors and students from outside Larimer and Weld Counties, whose expenditures benefit regional vendors. In addition, UNC is a primary source of higher education to residents of Larimer and Weld Counties and a supplier of trained workers to regional industries, enhancing overall productivity in the regional workforce.

Operations Spending Impact



UNC adds economic value to Larimer and Weld Counties as an employer of regional residents and a large-scale buyer of goods and services. In FY 2017-18, the university employed 1,792 full-time and part-time faculty and staff (not including research employees), 84% of whom lived in Larimer and Weld Counties. Total payroll at UNC was \$174.7 million (excluding payroll from research employees), much of which was spent in the region for groceries, mortgage and rent payments, dining out, and other household expenses. In addition, the university spent \$82.2 million on day-to-day expenses related to facilities, supplies, and professional services (excluding research expenditures).

UNC's day-to-day operations spending added \$237.9 million in income to the region during the analysis year. This figure represents the university's payroll,



\$237.9 million
Operations Spending Impact



\$4.7 million
Research Spending Impact



\$25.9 million
Construction Spending Impact



\$23.7 million
Spin-off Company Impact



\$3.2 million
Visitor Spending Impact



\$63.3 million
Student Spending Impact



\$185.5 million
Alumni Impact



\$544.2 million
TOTAL IMPACT

- OR -

8,429
JOBS SUPPORTED

the multiplier effects generated by the in-region spending of the university and its employees, and a downward adjustment to account for funding that the university received from regional sources. The \$237.9 million in added income is equivalent to supporting 2,784 jobs in the region.

Research Spending Impact



Research activities impact the economy by employing people and requiring the purchase of equipment and other supplies and services.

In FY 2017-18, UNC spent \$2.7 million on payroll to support research activities. This, along with \$2.4 million in other research spending, created a net total of \$4.7 million in added income for the regional economy. This added income is equivalent to supporting 61 jobs.

Construction Spending Impact



UNC commissioned contractors to build or renovate its facilities in FY 2017-18. The quick infusion of income and jobs that occurred in

the regional economy as a result of this construction spending is considered short-term due to the one-time nature of such projects. Nonetheless, the university's construction spending had a substantial impact on the regional economy in FY 2017-18, equal to \$25.9 million in added income and equivalent to supporting 386 jobs.

Spin-off Company Impact



UNC creates an exceptional environment that fosters innovation and entrepreneurship, evidenced by the number of UNC spin-off companies created in the region. In FY 2017-18, UNC spin-off

companies added \$23.7 million in income to the Larimer and Weld economy, which is equivalent to supporting 174 jobs.

Visitor Spending Impact



Thousands of visitors from outside the region were attracted to UNC during the analysis year to attend commencement, sports events, and other activities sponsored by the university. While in

the region, visitors spent money for lodging, food, transportation, and other personal expenses. The off-campus expenditures of the university's out-of-region visitors generated a net impact of \$3.2 million in added income for the regional economy in FY 2017-18. This \$3.2 million in added income is equivalent to supporting 74 jobs.

Student Spending impact



Around 67% of undergraduate and graduate students attending UNC in FY 2017-18 originated from outside the region, and some of these students relocated to Larimer and Weld Counties to attend UNC. These students may not have come to the region if the university did not exist. In addition, some in-region students, referred to as retained students, would have left Larimer and Weld Counties if not for the existence of UNC. While attending the university, these relocated and retained students spent money on groceries, accommodation, transportation, and other household expenses. This spending generated \$63.3 million in added income for the regional economy in FY 2017-18, which supported 1,496 jobs in Larimer and Weld Counties.

Alumni Impact



The education and training UNC provides for regional residents has the greatest impact. Since its establishment, students have studied at UNC and entered the regional workforce with greater knowledge and new skills. Today, thousands of former UNC students are employed in Larimer and Weld Counties. As a result of their UNC educations, the students receive higher earnings and increase the productivity of the businesses that employ them. In FY 2017-18, UNC alumni generated \$185.5 million in added income for the regional economy, which is equivalent to supporting 3,454 jobs.

Total Impact

UNC added \$544.2 million in income to the Larimer and Weld economy during the analysis year, equal to the sum of the operations, research, and construction spending impacts, the spin-off company impact, the visitor and student spending impacts, and the alumni impact. For context, the \$544.2 million impact was equal to approximately 1.7% of the total gross regional product (GRP) of Larimer and Weld Counties. This contribution that the university provided on its own was more than twice as large as the Arts, Entertainment, & Recreation industry in the region.

UNC's total impact can also be expressed in terms of jobs supported. The \$544.2 million impact supported 8,429 regional jobs, using the jobs-to-sales ratios specific to each industry in the region. This means that one out of every 48 jobs in Larimer and Weld Counties is supported by the activities of UNC and its students. In addition, the \$544.2 million, or 8,429 supported jobs, stemmed from different industry sectors. Among non-education industry sectors, UNC's spending and alumni in the Government, Education industry sector supported 1,152 jobs in FY 2017-18. These are impacts that would not have been generated without the university's presence in Larimer and Weld Counties.

UNC IMPACTS BY INDUSTRY (JOBS SUPPORTED)



2,681

Government, Education



1,152

Accommodation & Food Services



956

Health Care & Social Assistance



632

Retail Trade



544

Arts, Entertainment, & Recreation

**One out of every
48 jobs in Larimer
and Weld Counties
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Investment Analysis

An investment analysis evaluates the costs associated with a proposed venture against its expected benefits. If the benefits outweigh the costs, then the investment is financially worthwhile. The analysis presented here considers UNC as an investment from the perspectives of students, taxpayers, and society in Colorado.

Student perspective



In FY 2017-18, UNC served 15,825 credit and 31 non-credit students. In order to attend the university, the students paid for tuition, fees, books, and supplies. They also took out loans and will incur interest on those loans. Additionally, students gave up money they would have otherwise earned had they been working instead of attending college. The total investment made by UNC's students in FY 2017-18 amounted to a present value of \$239.8 million, equal to \$123.6 million in out-of-pocket expenses (including future principal and interest on student loans) and \$116.2 million in forgone time and money.

In return for their investment, UNC's students will receive a stream of higher future earnings that will continue to grow throughout their working lives. For example, the average UNC bachelor's degree graduate from FY 2017-18 will see an increase in earnings of \$21,900 each year compared to a person with a high school diploma or equivalent working in Colorado. Over a working lifetime, the benefits of the bachelor's degree over a high school diploma will amount to an undiscounted value of \$941.7 thousand in higher earnings per graduate. The present value of the cumulative higher future earnings that UNC's FY 2017-18 students will receive over their working careers is \$807.8 million.

STUDENTS SEE A HIGH
RATE OF RETURN FOR THEIR
INVESTMENT IN UNC



12.9%

Average annual return for
UNC students



9.9%

Stock market 30-year
average annual return

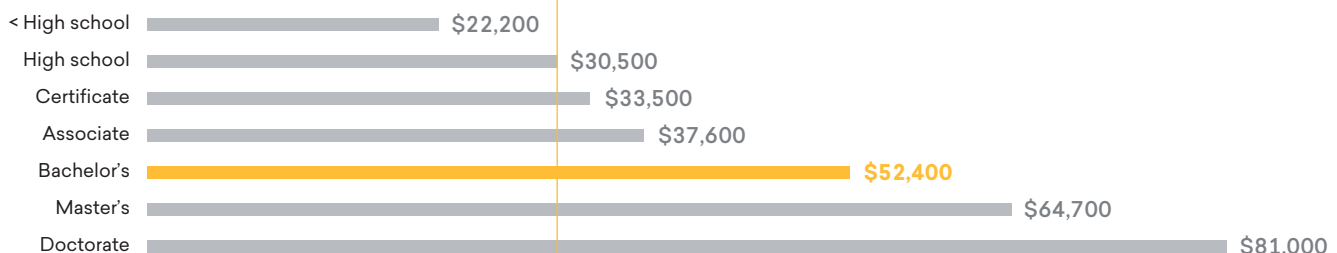


0.8%

Interest earned on savings account
(National Rate Cap)

Source: Forbes' S&P 500, 1989-2018. FDIC.gov, 6-2019.

The average bachelor's degree graduate from UNC will see an increase in earnings of **\$21,900** each year compared to a person with a high school diploma or equivalent working in Colorado.



Source: Emsi employment data.

The students' benefit-cost ratio is 3.4. In other words, for every dollar students invest in UNC, in the form of out-of-pocket expenses and forgone time and money, they will receive a cumulative value of \$3.40 in higher future earnings. Annually, the students' investment in UNC has an average annual internal rate of return of 12.9%, which is impressive compared to the U.S. stock market's 30-year average rate of return of 9.9%.

Taxpayer perspective



UNC generates more in tax revenue than it takes. These benefits to taxpayers consist primarily of taxes that the state and local government will collect from the added revenue created in the state. As UNC students will earn more, they will make higher tax payments throughout their working lives. Students' employers will also make higher tax payments as they increase their output and purchases of goods and services. By the end of the FY 2017-18 students' working lives, the state and local government will have collected a present value of \$197.1 million in added taxes.

Benefits to taxpayers will also consist of savings generated by the improved lifestyles of UNC students and the corresponding reduced government services. Education is statistically correlated with a variety of lifestyle changes. Students' UNC educations will generate savings in three main categories: 1) healthcare, 2) crime, and 3) income assistance. Improved health will lower students' demand for national health care services. In addition, students will be less likely to interact with the criminal justice system, resulting in a reduced demand for law enforcement and victim costs. UNC students will be more employable, so their reduced demand for income assistance such as welfare and unemployment benefits will benefit taxpayers. For a list of study references, contact the university for a copy of the main report. Altogether, the present value of the benefits associated with a UNC education will generate \$51.8 million in savings to state and local taxpayers.

Total taxpayer benefits amount to \$249 million, the present value sum of the added taxes and public sector savings. Taxpayer costs are \$54.3 million, equal to the amount of state and local government funding UNC received in FY 2017-18. These benefits and costs yield a benefit-cost ratio of 4.6. This means that for every

** The majority of taxpayer support for UNC during FY 2017-18 was from the State.

For every dollar of public money invested in UNC, taxpayers will receive a cumulative value of \$4.60 over the course of the students' working lives.



STUDENT PERSPECTIVE

\$807.8 million
Present value benefits

\$239.8 million
Present value costs

\$567.9 million
Net present value

Benefit-cost Ratio	Rate of Return
3.4	12.9%



TAXPAYER PERSPECTIVE

\$249 million
Present value benefits

\$54.3 million
Present value costs

\$194.7 million
Net present value

Benefit-cost Ratio	Rate of Return
4.6	17.0%



SOCIAL PERSPECTIVE

\$2.6 billion
Present value benefits

\$444.1 million
Present value costs

\$2.1 billion
Net present value

Benefit-cost Ratio	Rate of Return
5.8	n/a*

* The rate of return is not reported for the social perspective because the beneficiaries of the investment are not necessarily the same as the original investors.

dollar of public money invested in UNC in FY 2017-18, taxpayers will receive a cumulative value of \$4.60 over the course of the students' working lives. The average annual internal rate of return for taxpayers is 17.0%, which compares favorably to other long-term investments in the public and private sectors.

Social perspective



Society as a whole in Colorado benefits from the presence of UNC in two major ways. Primarily, society benefits from an increased economic base in the state. This is attributed to higher student earnings and increased business output, which raise economic prosperity in Colorado.

Benefits to society also consist of the savings generated by the improved lifestyles of UNC students. As discussed in the previous section, education is statistically correlated with a variety of lifestyle changes that generate social savings. Note that these costs are avoided by the consumers but are distinct from the costs avoided by the taxpayers outlined above. Healthcare savings include avoided medical costs associated with smoking, alcohol dependence, obesity, drug abuse, and depression. Savings related to crime include reduced security expenditures and insurance administration, lower victim costs, and reduced expenditures by the criminal justice system. Income assistance savings include reduced welfare and unemployment claims. For a list of study references, contact the university for a copy of the main report.

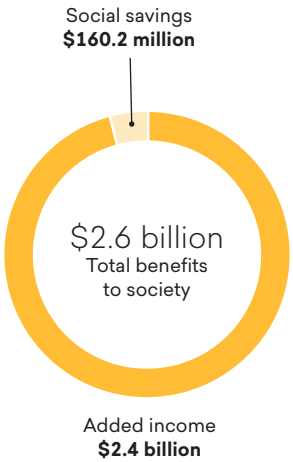
Altogether, the social benefits of UNC equal a present value of \$2.6 billion. These benefits include \$2.4 billion in added income through students' increased lifetime earnings and increased business output, as well as \$160.2 million in social savings related to health, crime, and income assistance in Colorado. People in Colorado invested a present value total of \$444.1 million in UNC in FY 2017-18. The cost includes all the university and student costs.

The benefit-cost ratio for society is 5.8, equal to the \$2.6 billion in benefits divided by the \$444.1 million in costs. In other words, for every dollar invested in UNC, people in Colorado will receive a cumulative value of \$5.80 in benefits. The benefits of this investment will occur for as long as UNC's FY 2017-18 students remain employed in the state workforce.

Summary of investment analysis results

The results of the analysis demonstrate that UNC is a strong investment for all three major stakeholder groups—students, taxpayers, and society. As shown, students receive a great return for their investments in a UNC education. At the same time, taxpayers' investment in UNC returns more to government budgets than it costs and creates a wide range of social benefits throughout Colorado.

SOCIAL BENEFITS
IN COLORADO FROM UNC



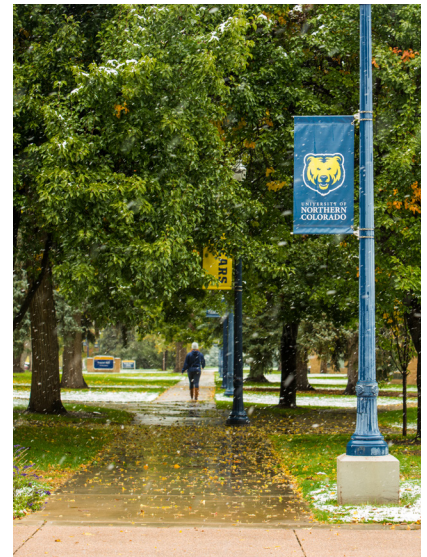
Conclusion

The results of this study demonstrate that UNC creates value from multiple perspectives. The university benefits regional businesses by increasing consumer spending in the region and supplying a steady flow of qualified, trained workers to the workforce. UNC enriches the lives of students by raising their lifetime earnings and helping them achieve their individual potential. The university benefits state and local taxpayers through increased tax receipts and a reduced demand for government-supported social services. Finally, UNC benefits society as a whole in Colorado by creating a more prosperous economy and generating a variety of savings through the improved lifestyles of students.

About the Study

Data and assumptions used in the study are based on several sources, including the FY 2017-18 academic and financial reports from UNC, industry and employment data from the U.S. Bureau of Labor Statistics and U.S. Census Bureau, outputs of Emsi's Multi-Regional Social Accounting Matrix model, and a variety of studies and surveys relating education to social behavior. The study applies a conservative methodology and follows standard practice using only the most recognized indicators of economic impact and investment effectiveness. For a full description of the data and approach used in the study, please contact the university for a copy of the main report.

The results of this study demonstrate that UNC creates value from
multiple perspectives.



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