



Analysis of the Economic Impact and Benefit of Education

THE ECONOMIC VALUE OF COLORADO STATE UNIVERSITY-GLOBAL
CAMPUS TO THE COLORADO ECONOMY

May 2017

A photograph of a man in a blue and white plaid shirt smiling while holding a baby in a bright green shirt. They are looking at a laptop screen. The background is a blurred indoor setting.

EXECUTIVE SUMMARY

Image provided by CSU-Global.

 Emsi

Executive Summary

Colorado State University-Global Campus (CSU-Global) creates value in a variety of ways. The university improves higher education delivery throughout the state and helps students increase their employability and potential. Beyond its students, it provides benefits for taxpayers and Colorado society as a whole.

The value of CSU-Global influences both the lives of students and the state economy. The university serves a range of industries in Colorado, supports state businesses, and benefits society as a whole from an expanded economy and improved quality of life. The benefits created by CSU-Global extend as far as the state government through increased tax revenues and public sector savings.

This study investigates the economic impact created by CSU-Global on the business community and the benefits that the university generates for students, taxpayers, and society. The university serves the entire state of Colorado.

The following two analyses are presented:

- **Economic impact analysis**
- **Benefits analysis**

All results reflect student and financial data for Fiscal Year (FY) 2015-16. Impact on the state business community is reported under the economic impact analysis. Results are measured in terms of added income. The benefits to students, taxpayers, and society are reported under the benefits analysis. Both analyses are described more fully in the following sections.



Image provided by CSU-Global.

Economic Impact Analysis

CSU-Global's impact comes from the education and training that it provides to Colorado residents. Since the university was established, students have graduated from CSU-Global and entered or re-entered the workforce with new skills that they have been able to apply directly to their jobs. Today, thousands of CSU-Global students are employed in Colorado.

THE ECONOMIC IMPACT OF CSU-GLOBAL ALUMNI

While taking courses at the university, students receive education and training, providing them with skills that allow them to increase their productivity and command a higher wage. Each year a new cohort of CSU-Global students enters or re-enters the workforce, expanding the stock of CSU-Global skills that have been accumulating in the state since the university first started serving students. The increased productivity that occurs in the workforce as the university's students apply their newly-acquired skills to their jobs boosts the competitiveness of Colorado industries, as the employers of CSU-Global's students enjoy the fruits of this increased productivity in the form of higher profits. The business community as a whole benefits from the increased spending that occurs across the state.

During the analysis year, past and present students of CSU-Global generated \$16 million in added income for the state. This \$16 million in added income is equivalent to supporting 196 jobs.

Table 1 lists the top industries impacted by the \$16 million in added income. These are determined by the industries employing CSU-Global alumni and the associated multiplier effects as the alumni and their employers spend more. For example, CSU-Global alumni and associated multiplier effects supported 28 jobs in the Professional & Technical Services industry sector.

TABLE 1: Top industries impacted by CSU-Global alumni

TOTAL INCOME (MILLIONS)	JOB
\$2.5	28
Professional & Technical Services	
\$1.5	18
Government, Non-Education	
\$1.5	26
Health Care & Social Assistance	
\$1.5	8
Information	
\$1.3	10
Finance & Insurance	
\$7.8	106
All other industries	
\$16.0	196
Total impact	



Overall Benefits

The benefits generated by CSU-Global affect the lives of many people. Students benefit the most from the higher earnings and improved quality of life that they enjoy as a result of the education and training they receive from the university. Benefits extend as far as state and local government, in the form of added tax revenues and a reduced dependency on publicly-funded services. Finally, benefits accrue to other members of society, as students expand the state economy and generate a wide variety of savings.

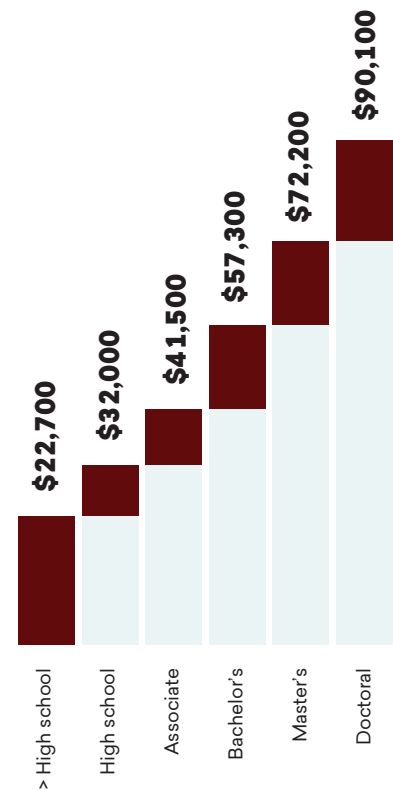
STUDENT BENEFITS

In FY 2015-16, CSU-Global served 6,463 credit students and 374 non-degree seeking students that currently reside in Colorado. In order to attend college, students paid for tuition, fees, books, and supplies. They also gave up money that they would have otherwise earned had they been working instead of attending college. The total investment made by CSU-Global's students in FY 2015-16 amounted to \$41.7 million, equal to \$35.3 million in out-of-pocket expenses plus \$6.5 million in forgone time and money.

In return for their investment, CSU-Global's students will receive a stream of higher future earnings that will continue to grow through their working lives. As shown in Figure 1, mean earnings levels at the midpoint of the average-aged worker's career increase as people achieve higher levels of education. For example, the average bachelor's degree completer from CSU-Global will see an increase in earnings of \$25,300 each year compared to someone with a high school diploma or equivalent working in Colorado. Over a working lifetime, this increase in earnings amounts to an undiscounted value of approximately \$809,600 in higher earnings.

The present value of the higher future earnings that CSU-Global's students will receive over their working careers is \$159.8 million. Dividing this value by the \$41.7 million in student costs yields a benefit-cost ratio of 3.8. In other words, for every \$1 students invest in CSU-Global in the form of out-of-pocket expenses and forgone time and money, they receive a cumulative of \$3.80 in higher future earnings. The average annual rate of return for students is 15.2%. This is an impressive return, especially when compared to the 10-year average 7.2% return to the U.S. stock market (Figure 2).

FIGURE 1: Higher earnings by education level at career midpoint in Colorado



Source: Emsi complete employment data.



TAXPAYER BENEFITS

Benefits to taxpayers consist primarily of taxes that the government will collect from the added revenue created in the state. As CSU-Global students earn more, they will make higher tax payments. Employers will also make higher tax payments as they increase their output and purchase more supplies and services. By the end of the FY 2015-16 students' working careers, the state government will have collected a present value of \$54.5 million in added taxes.

Benefits to taxpayers also consist of the savings generated by the improved lifestyles of students and the proportionally reduced government expenditures. Education is statistically correlated with a variety of lifestyle changes that generate taxpayer savings across three main categories: 1) health, 2) crime, and 3) unemployment. Improved health habits lower the students' demand for national health care services. Students are also less likely to commit crimes, so the demand for law enforcement and criminal justice services is reduced (study references are available in the main report). Students are also more employable, so the demand for welfare and unemployment benefits, such as earnings assistance and welfare benefits, is reduced. For a list of study references to these statistical benefits, please contact the university for a copy of the main report. All of these benefits will generate a present value of \$26.6 million in savings to state taxpayers. Total benefits to taxpayers equal \$81.1 million, equal to the sum of the added taxes and public sector savings.

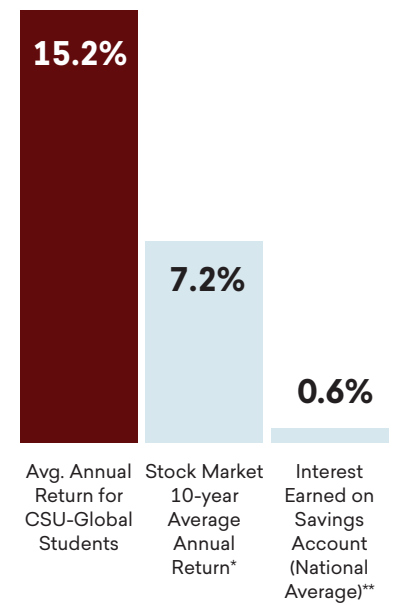
SOCIAL BENEFITS

Society as a whole within Colorado benefits from the presence of CSU-Global in two major ways. The first and largest benefit that society receives is an increased economic base. As discussed in the previous section, the higher student earnings and increased business output occurs across the state. This raises prosperity in Colorado and expands the economic base for society as a whole.

Benefits to society also consist of the savings generated by the improved lifestyles of students. Similar to the taxpayer section above, education is statistically correlated with a variety of lifestyle changes that generate social savings. Note that these costs are avoided by the consumers, and are distinct from the costs avoided by taxpayers outlined above. Health savings include avoided medical costs associated with smoking, alcoholism, obesity, drug abuse, and mental disorders. Crime savings include reduced security expenditures and insurance administration, lower victim costs, and reduced criminal justice system expenditures. Unemployment savings include the reduced employer contributions towards unemployment claims. For a list of study references to these statistical benefits, please contact the university for a copy of the main report.

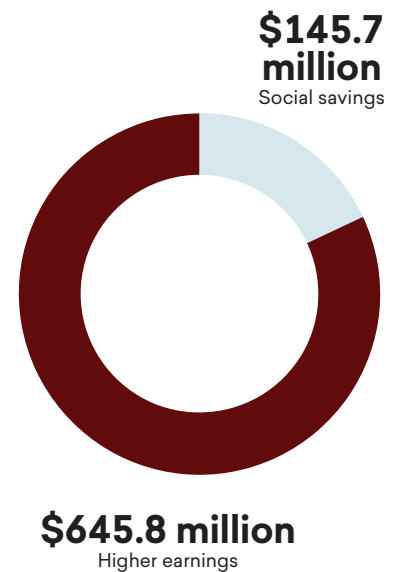
Figure 3 shows the present value of the higher earnings and social savings that will occur in Colorado over the working lifetime of the FY 2015-16 student population at CSU-Global. Higher earnings amounts to a present value of \$645.8 million due to the increased lifetime earnings of students and associated increases in busi-

FIGURE 2: Student rate of return



* Forbes' S&P 500, 1994-2014.
 ** FDIC.gov 12-2016.

FIGURE 3: Present value of higher earnings and social savings in Colorado



ness output. Social savings amount to \$145.7 million, the sum of health, crime, and unemployment savings in Colorado. Altogether, total benefits to society equal \$791.5 million (in present value terms).

SUMMARY OF BENEFITS ANALYSIS RESULTS

Table 2 presents the results of the benefits analysis for students, taxpayers, and society. As shown, students receive great value for their educational investment. At the same time, even with few taxpayer costs, CSU-Global creates significant benefits for taxpayers and society as a whole.

TABLE 3: Summary of benefits analysis results

	STUDENT BENEFITS	TAXPAYER BENEFITS	SOCIAL BENEFITS
Benefits (millions)	\$159.8	\$81.1	\$791.5
Costs (millions)	\$41.7		
Net present value (millions)	\$118.0		
Benefit-cost ratio	3.8		
Rate of return	15.2%		



Image provided by CSU-Global.



Conclusion

The results of this study demonstrate that CSU-Global creates value from multiple perspectives. The university benefits businesses across Colorado by supplying a steady flow of qualified, trained workers into the workforce. It enriches the lives of students by raising their lifetime earnings and helping them achieve their individual potential. It benefits state taxpayers through increased tax receipts across the state and a reduced demand for government-supported social services. Finally, it 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 2015-16 academic and financial reports from the university, 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 investment effectiveness and economic impact. For a full description of the data and approach used in the study, please contact the university for a copy of the main report.



Emsi, a CareerBuilder company, is a leading provider of economic impact studies and labor market data to educational institutions, workforce planners, and regional developers in the U.S. and internationally. Since 2000, Emsi has completed over 1,700 economic impact studies for educational institutions in four countries. Visit www.economicmodeling.com for more information about Emsi's products and services.

