



# THE ECONOMIC VALUE

## *of American Indian and Alaska Native Tribal Colleges & Universities*

AUGUST 2015

ANALYSIS OF THE ECONOMIC IMPACT & RETURN ON INVESTMENT OF EDUCATION

*The nation's 37 Tribal Colleges and Universities (TCUs) create value in many ways. TCUs play a key role in helping students increase their employability and achieve their individual potential. TCUs provide students with the skills they need to have a fulfilling and prosperous career while also helping to sustain their tribes' history, culture, language, lands, and sovereignty. The work of the TCUs helps tribes nationwide promote cultural and economic stability.*

The contribution of TCUs influences the lives of students, tribal economies, state economies, and society across the U.S. The benefits created by TCUs even extend to tribal, state, and local government through increased tax revenues and public sector savings.

The purpose of this study is to investigate the economic impacts created by TCUs on the business community and the benefits that the TCUs generate in return for the investments made by their key stakeholder groups—students, tribes, society, and taxpayers. The following two analyses are presented:

- **ECONOMIC IMPACT ANALYSIS**
- **INVESTMENT ANALYSIS**

All results reflect student and financial data for Academic Year (AY) 2013-14. Impacts on the business community are reported under the economic impact analysis, and the quantifiable return on investment to students, tribes, society, and taxpayers are reported under the investment analysis. Both analyses are described more fully in the following sections.

# ECONOMIC IMPACT ANALYSIS

*The TCUs promote economic growth in the U.S. by creating and developing a skilled American Indian/Alaska Native workforce. TCUs are primary sources of education for tribes and tribal people throughout the U.S. and are suppliers of trained workers to U.S./tribal industries. The added income, or gross domestic product, that these students generate over the course of their careers is a source of prosperity for the nation.*

## JOB EQUIVALENTS BASED ON INCOME

Job equivalents represent full- and part-time jobs that would not have occurred in the nation without the TCUs. They are calculated by jobs to sales ratios specific to each industry. The known alumni impact of \$2.3 billion in added income supports 28,778 within the nation.

## ALUMNI IMPACT

The nationwide economic impact analysis examines the impact of the students served by TCUs. The services provided by the TCUs enable students to add to business productivity and increase consumer spending. Results are measured in terms of added income, or gross domestic product, and quantify the increased productivity of alumni that were employed in the regional workforce during the analysis year.

TCUs' biggest impact results from the education and training they provide for local residents. Since the TCUs were established, students have studied at TCUs and entered the workforce with new skills. Today, thousands of former students are employed in the U.S. This wealth of human capital is a valuable asset to the nation, as the following impact reveals:

During the analysis year, former students of TCUs generated \$2.3 billion in added income throughout the country. This figure represents the higher wages that students earned during the year, the increased output of the businesses that employed the students, and the multiplier effects that occurred as students and their employers spent money at other businesses.

## INCOME CREATED BY TCUS IN AY 2013-14 (ADDED INCOME)

TOTAL ALUMNI IMPACT	
<b>\$2.3 BILLION</b>	<b>ADDED INCOME</b>
<b>28,778</b>	<b>JOBS</b>

# INVESTMENT ANALYSIS

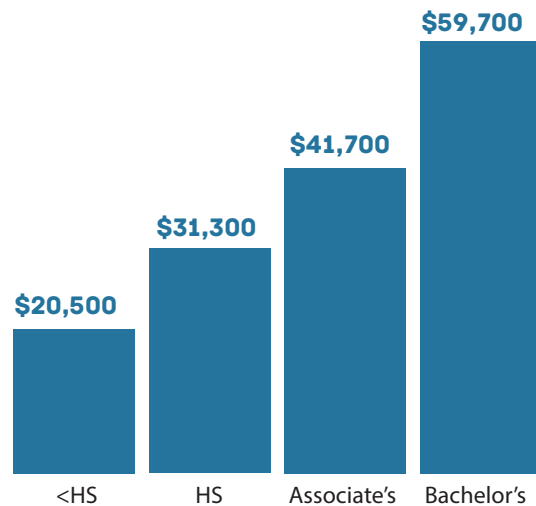
*Investment analysis is the process of evaluating total costs and measuring these against total benefits to determine whether or not a proposed venture will be profitable. If benefits outweigh costs, then the investment is worthwhile. If costs outweigh benefits, then the investment will lose money and is considered unprofitable. This study considers TCUs as investments from the perspectives of students, tribes, society, and taxpayers. The backdrop for the analysis is the entire U.S. economy.*

## STUDENT PERSPECTIVE

In 2013-14, TCUs served 22,797 credit students and 8,697 non-credit students. In order to attend college, most 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 TCU students in AY 2013-14 amounted to \$194.1 million, equal to \$38.8 million in out-of-pocket expenses plus \$155.3 million in forgone time and money.

In return for their investment, TCU students will receive a stream of higher future wages that will continue to grow through their working lives. As shown in Figure 1, mean income levels at the midpoint of the average-aged worker's career increase as people achieve higher levels of education. For example, the average associate's degree completer from TCUs will see an increase in earnings of \$10,400 each year compared to someone with a high school diploma or equivalent. Over a working lifetime, this increase in earnings amounts to an undiscounted value of approximately \$389,813 in higher income.

**FIGURE 1. ANNUAL INCOME BY EDUCATION LEVEL AT CAREER MIDPOINT IN THE U.S.**



Source: EMSI complete employment data.



The present value of the higher future wages that TCU students will receive over their working careers is \$794.3 million. Dividing this value by the \$194.1 million in student costs yields a benefit-cost ratio of 4.1. In other words, for every \$1 students invest in TCUs in the form of out-of-pocket expenses and forgone time and money, they receive a cumulative of \$4.10 in higher future wages. The average annual rate of return for students is 16.6 percent. This is an impressive return compared, for example, to the less than 1 percent return per annum that is generally expected from saving money in today's standard bank savings accounts.

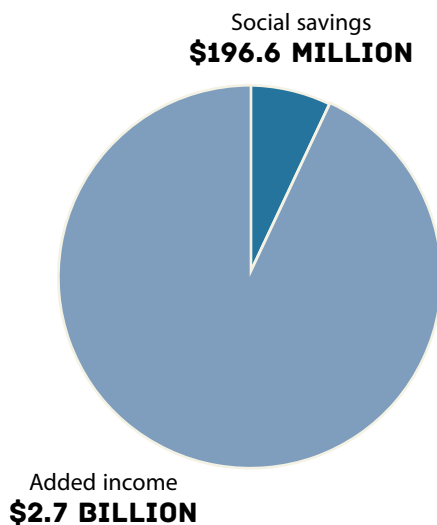
## SOCIAL PERSPECTIVE

The nation as a whole benefits from the presence of TCUs in two fundamental ways. The first and largest benefit that society receives is the added income created. As discussed in the previous section, students earn more because of the skills they acquire while attending TCUs. Businesses also earn more because the enhanced skills of students make them more productive. Together, higher student wages and increased business output stimulate increases in income across the reservation and geographic region, thereby raising prosperity across the U.S. and expanding the economic base for society as a whole.

Benefits to society also consist of the savings generated by the improved lifestyles of students. Education is statistically correlated with a variety of lifestyle changes that generate social savings across three main categories: 1) health, 2) crime, and 3) unemployment. Health savings include avoided medical costs associated with smoking, alcoholism, obesity, drug abuse, and mental disorders. Crime savings include reduced security expenditure and insurance administration, lower victim costs, and reduced criminal justice system expenditures. Unemployment savings include the reduced demand for income assistance and welfare benefits. For a list of study references to these statistical benefits, please contact AIHEC for a copy of the main report.

Figure 2 shows the present value of the added income and social savings that will occur in the U.S. over the working lifetime of the 2013-14 student population at TCUs. Added income amounts to a present value of \$2.7 billion due to the increased lifetime incomes of students and associated increases in business output. Social savings amount to \$196.6 million, the sum of health, crime, and unemployment savings in the U.S. Altogether, total

**FIGURE 2. PRESENT VALUE OF ADDED INCOME AND SOCIAL SAVINGS ACROSS THE U.S.**





benefits to society equal \$2.9 billion (in present value terms).

Society invested \$572.5 million in TCUs during the analysis year. This includes all expenditures by TCUs, all student expenditures, and all student opportunity costs. For every dollar of this investment, society as a whole in U.S. will receive a cumulative value of \$5.20 in benefits, equal to the \$2.9 billion in benefits divided by the \$572.5 million in costs. These benefits will occur for as long as TCUs' 2013-14 students remain employed in the regional workforce.

## TAXPAYER PERSPECTIVE

From the taxpayer perspective, benefits consist primarily of the taxes that federal, state, and tribal government will collect from the added income created in the region. As TCU 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 students' working careers, the U.S. government will have collected a present value of \$715.1 million in added taxes.

A portion of the savings enjoyed by society also accrues to taxpayers. Students are more employable, so the demand for welfare and unemployment benefits reduces. 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 services reduces (study references are available in the main report). All of these benefits will generate a present value of \$46 million in savings to taxpayers.

Total monetary benefits to taxpayers equal \$761.2 million, equal to the sum of the added taxes and public sector savings. Comparing this to the taxpayer costs of \$337.9 million—equal to the funding that TCUs received from the government during the analysis year—yields a benefit-cost ratio of 2.4. This means that for every \$1 of public money invested in TCUs, taxpayers receive a cumulative value of \$2.40 over the course of the students' working lives. The average annual rate of return is 6.2 percent, a solid investment that compares favorably with other long-term investments in both the private and public sectors.

The federal investment in TCUs is far greater than this analysis can measure. Many benefits such as preservation of native languages, tribal traditions, and more cannot be measured in economic terms.

## SUMMARY OF INVESTMENT ANALYSIS RESULTS

STUDENT PERSPECTIVE	
<b>\$794,312</b>	Benefits (thousands)
<b>\$194,129</b>	Costs (thousands)
<b>\$600,182</b>	Net present value (thousands)
<b>4.1</b>	Benefit-cost ratio
<b>16.6%</b>	Rate of return

SOCIAL PERSPECTIVE	
<b>\$2,956,940</b>	Benefits (thousands)
<b>\$572,488</b>	Costs (thousands)
<b>\$2,384,453</b>	Net present value (thousands)
<b>5.2</b>	Benefit-cost ratio
<b>NA</b>	Rate of return*

TAXPAYER PERSPECTIVE	
<b>\$798,165</b>	Benefits (thousands)
<b>\$337,860</b>	Costs (thousands)
<b>\$460,305</b>	Net present value (thousands)
<b>2.4</b>	Benefit-cost ratio
<b>6.2%</b>	Rate of return

\* 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.

## SUMMARY OF INVESTMENT ANALYSIS RESULTS

Table 2 presents the results of the investment analysis for all TCU major stakeholder groups—students, tribes, society, and taxpayers. As shown, students receive great value for their educational investment. At the same time, the investment made by taxpayers in TCUs creates a wide range of benefits to society and returns more to government budgets than it costs.

The results of this study demonstrate that TCUs create value from multiple perspectives. The TCUs benefit national businesses



# CONCLUSION



by supplying a steady flow of qualified, trained workers into the workforce. Each TCU enriches the lives of students by raising their lifetime incomes and helping them achieve their individual potential. Together, TCUs benefit society as a whole by creating a more prosperous economy and generating a variety of savings through the improved lifestyles of students. The TCUs benefit taxpayers through increased tax receipts across the region and a reduced demand for government-supported social services. Finally, the benefit TCUs provide in enriching the nation by preserving tribal languages, cultures, and traditions cannot be measured in economic terms. It is, indeed, priceless.

## ABOUT THE STUDY

Data and assumptions used in the study are based on several sources, including the 2013-14 academic and financial reports from the TCUs, industry and employment data from the U.S. Bureau of Labor Statistics and U.S. Census Bureau, outputs of EMSI's Social Accounting Matrix (SAM) 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 AIHEC for a copy of the technical report.

## ABOUT EMSI

Economic Modeling Specialists International, 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 1,200 economic impact studies for educational institutions in four countries. Visit [www.economicmodeling.com](http://www.economicmodeling.com) for more information about EMSI's products and services.