

# THE ECONOMIC VALUE

*Of Sinte Gleska University*



APRIL 2016

ANALYSIS OF THE ECONOMIC IMPACT & RETURN ON INVESTMENT OF EDUCATION

*Sinte Gleska University (SGU) creates value in many ways. The university plays a key role in helping students increase their employability and achieve their individual potential. It provides students with the skills they need to impact their families and communities. Further, it supplies an environment for students to meet new people, increase their self-confidence, and promote their overall health and well-being.*

The value of SGU influences both the lives of students and also the state economy. The university serves a range of industries in South Dakota, supports local businesses, and benefits society nationwide from an expanded economy and improved quality of life. The benefits created by SGU even extend back to government through increased tax revenues and public sector savings.

The university serves the state of South Dakota. The purpose of this study is to investigate the economic impacts created by SGU on the business community within the state and the benefits that 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 student and financial data for Fiscal Year (FY) 2013-14. Impacts on the state business community are reported under the economic impact analysis in terms of gross regional product (GSP), and the return on investment to students, taxpayers, and society are reported under the investment analysis. Both analyses are described more fully in the following sections.

# ECONOMIC IMPACT ANALYSIS

*SGU promotes economic growth in South Dakota in a variety of ways. The university is an employer and buyer of goods and services, and the living expenses of students from outside of South Dakota benefit local businesses. In addition, SGU is a primary source of education to Rosebud Indian Reservation residents and a supplier of trained workers to state.*

## OPERATIONS SPENDING IMPACT

SGU is an important employer in South Dakota. In FY 2013-14, the university employed 223 full-time and part-time faculty and staff. Of these, 100% lived in South Dakota. Total payroll at SGU was \$6.9 million, much of which was spent in the state for groceries, rent, eating out, clothing, and other household expenses.

SGU is itself a large-scale buyer of goods and services. In FY 2013-14 the university spent \$7.5 million to cover its expenses for facilities, professional services, and supplies.

SGU added \$11.8 million in GSP to the state during the analysis year as a result of its day-to-day operations. This figure represents the university's payroll, the multiplier effects generated by the spending of the university and its employees, and a downward adjustment to account for funding that the university received from government sources.

**TABLE 1. IMPACTS CREATED BY SGU IN FY 2013-14**

	<b>GROSS REGIONAL PRODUCT</b>	<b>JOBS</b>
<b>Operations Spending Impact</b>	<b>\$11.8 million</b>	<b>286</b>
<b>Alumni Impact</b>	<b>\$37.6 million</b>	<b>720</b>
<b>Total Impact</b>	<b>\$49.4 million</b>	<b>1,005</b>



## ALUMNI IMPACT

The education and training SGU provides for state residents results in the greatest impact. Since the university was established, students have studied at SGU and entered the workforce with new skills. Today, thousands of former students are employed in South Dakota.

During the analysis year, past and present students of SGU generated \$37.6 million in GSP for the state. 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.

## TOTAL IMPACT

The overall impact of SGU on the local business community during the analysis year amounted to \$49.4 million in GSP, equal to the sum of the operations spending impact and the alumni impact. This GSP was equal to approximately 0.1% of South Dakota's GSP.

The total impact is expressed in the jobs supported by the gross regional product; they are calculated by jobs to sales ratios specific to each industry. Overall, the \$49.4 million impact supports 1,005 jobs.

A portion of the total \$49.4 million is broken out into an industry-by-industry impact, ordered by GSP magnitude. Because industries have different jobs-to-sales ratios, the associated jobs supported by the SGU impact differ by industry. Nonetheless, these are impacts that would not have been generated without the university presence.

**TABLE 2. SGU IMPACT BY INDUSTRY**

INDUSTRY	GRP	JOBS
Public Administration	\$14.7M	277
Educational Services	\$8.5M	275
Health Care and Social Assistance	\$7.6M	218
Finance and Insurance	\$3.9M	49
Real Estate and Rental and Leasing	\$2.1M	15

# INVESTMENT ANALYSIS

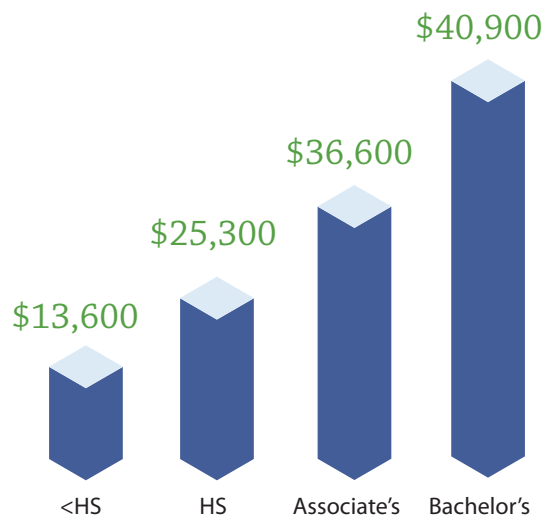
*Investment analysis is the process of evaluating total costs and measuring these against total benefits to determine whether or not a proposed venture will be profitable. If benefits outweigh costs, then the investment is worthwhile. If costs outweigh benefits, then the investment will lose money and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

## STUDENT PERSPECTIVE

In FY 2013-14, SGU served 1,642 credit students and 0 non-credit students. 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 SGU's students in FY 2013-14 amounted to \$9.5 million, equal to \$2.1 million in out-of-pocket expenses plus \$7.4 million in forgone time and money.

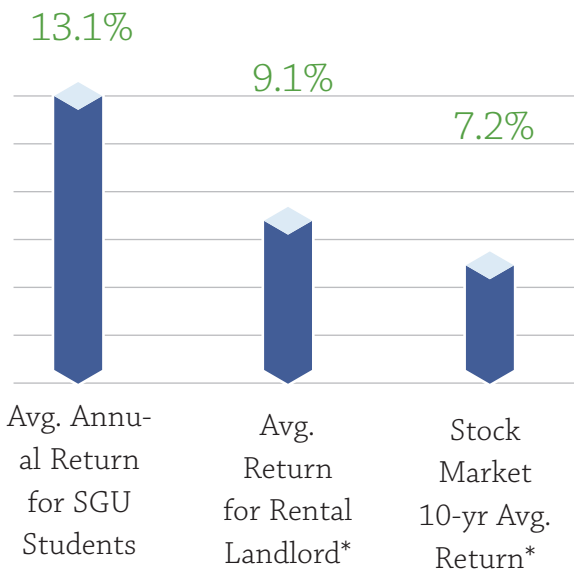
In return for their investment, SGU's students will receive a stream of higher future wages that will continue to grow through their working lives. As shown in Figure 1, mean income levels at the midpoint of the average-aged worker's career increase as people achieve higher levels of education. For example, the average associate's degree completer from SGU will see an increase in earnings of \$11,300 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 \$639,600 in higher income.

**FIGURE 1. ANNUAL INCOME BY EDUCATION LEVEL AT CAREER MIDPOINT IN SOUTH DAKOTA**



Source: EMSI complete employment data.

**FIGURE 2. STUDENT RATE OF RETURN**



\*RealtyTrac's Q3 2014 study of 586 counties nationwide.  
\*Forbes's S&P 500 (compounded annualized) avg. return, 1994-2014.



The present value of the higher future wages that SGU's students will receive over their working careers is \$29.4 million. Dividing this value by the \$9.5 million in student costs yields a benefit-cost ratio of 3.1. In other words, for every \$1 students invest in SGU in the form of out-of-pocket expenses and forgone time and money, they receive a cumulative of \$3.10 in higher future wages. The average annual rate of return for students is 13.1%. This is an impressive return compared, for example, to the less than 1% return per annum that is generally expected from saving money in today's standard bank savings accounts.

### TAXPAYER PERSPECTIVE

SGU generates more in tax revenue than it takes. These benefits to taxpayers consist primarily of taxes that the government will collect from the added income created by the students. As SGU 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 2013-14 students' working careers, the government will have collected a present value of \$23.5 million in added taxes.

Benefits to taxpayers 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 income 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 \$5.8 million in savings to taxpayers.

Total benefits to taxpayers equal \$29.3 million, equal to the sum of the added taxes and public sector savings. Comparing this to the taxpayer costs of \$9.5 million—equal to the funding that SGU received from the government during the analysis year—yields a benefit-cost ratio of 3.1. This means that for every \$1



of public money invested in SGU, taxpayers receive a cumulative value of \$3.10 over the course of the students' working lives. The average annual rate of return is 8.3%, a solid investment that compares favorably with other long-term investments in both the private and public sectors.

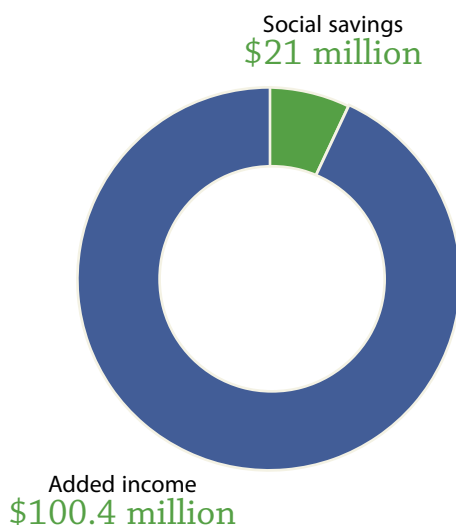
## SOCIAL PERSPECTIVE

Society nationwide benefits from the presence of SGU in two major ways. The first and largest benefit that society receives is the added income created nationwide. As discussed in the previous section, students earn more because of the skills they acquire while attending SGU. 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 nation, thereby raising prosperity 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. Similar to the taxpayer section above, 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. 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 added income and social savings that will occur nationwide over the working lifetime of the FY 2013-14 student population at SGU. Added income amounts to a present value of \$100.4 million due to the increased lifetime incomes of students and associated increases in business output. Social savings amount to \$21 million, the sum of health, crime, and unemployment savings nationwide. Altogether, total benefits to society equal \$121.4 million (in present value terms).

**FIGURE 3. PRESENT VALUE OF ADDED INCOME AND SOCIAL SAVINGS NATIONWIDE**



**TABLE 3. SUMMARY OF INVESTMENT ANALYSIS RESULTS**

<b>STUDENT PERSPECTIVE</b>	
<b>\$29,388</b>	Benefits (thousands)
<b>\$9,465</b>	Costs (thousands)
<b>\$19,923</b>	Net present value (thousands)
<b>3.1</b>	Benefit-cost ratio
<b>13.1%</b>	Rate of return

<b>TAXPAYER PERSPECTIVE</b>	
<b>\$29,256</b>	Benefits (thousands)
<b>\$9,486</b>	Costs (thousands)
<b>\$19,769</b>	Net present value (thousands)
<b>3.1</b>	Benefit-cost ratio
<b>8.3%</b>	Rate of return

<b>SOCIAL PERSPECTIVE</b>	
<b>\$121,429</b>	Benefits (thousands)
<b>\$22,255</b>	Costs (thousands)
<b>\$99,174</b>	Net present value (thousands)
<b>5.5</b>	Benefit-cost ratio
<b>NA</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.

Society invested \$22.3 million in SGU educations during the analysis year. This includes all expenditures by SGU, all student expenditures, and all student opportunity costs. For every dollar of this investment, society nationwide will receive a cumulative value of \$5.50 in benefits, equal to the \$121.4 million in benefits divided by the \$22.3 million in costs. These benefits will occur for as long as SGU's FY 2013-14 students remain employed.

## **SUMMARY OF INVESTMENT ANALYSIS RESULTS**

Table 3 presents the results of the investment analysis for all three of SGU's major stakeholder groups—students, society, and taxpayers. As shown, students receive great value for their educational investment. At the same time, the investment made by taxpayers to the university creates a wide range of benefits to society and returns more to government budgets than it costs.



# CONCLUSION



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

## ABOUT THE STUDY

Data and assumptions used in the study are based on several sources, including the FY 2013-14 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 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 the university for a copy of the technical report.

## ABOUT EMSI

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