

The Economic Impact of the South Dakota Public University System

NOVEMBER 2016

November 2016

This study is co-sponsored by the South Dakota Board of Regents and the South Dakota Chamber of Commerce & Industry. For questions about methodology or interpretation, please contact the study's Lead Investigator at: Mike.Allgrunn@usd.edu

RESEARCH TEAM:

Michael Allgrunn, Associate Professor of Economics,
Beacom School of Business, University of South Dakota

Travis L. Letellier, Visiting Assistant Professor of Economics,
Beacom School of Business, University of South Dakota

Joslynn Clauson, Research Assistant

Table of Contents

03 EXECUTIVE SUMMARY

04 INTRODUCTION

05 DATA

08 RESULTS

Institutional Summaries

09 BLACK HILLS STATE UNIVERSITY

10 DAKOTA STATE UNIVERSITY

11 NORTHERN STATE UNIVERSITY

12 SOUTH DAKOTA SCHOOL OF MINES & TECHNOLOGY

13 SOUTH DAKOTA STATE UNIVERSITY

14 UNIVERSITY OF SOUTH DAKOTA

Appendix

15 SELECTED STAKEHOLDER COMMENTS

Executive Summary

This report analyzes the quantifiable impacts of the six public universities on the economy of South Dakota. These universities play a vital role in South Dakota's economic growth and well-being. The public university system is supported by the State of South Dakota and governed by a single Board of Regents.

HIGHLIGHTS INCLUDE:



South Dakota public universities generate approximately

\$2.66 BILLION

of annual economic impact to South Dakota from a state investment of \$197 million.



65%

of South Dakota jobs will require a post-secondary credential by 2020, with



28%

of these jobs requiring a four-year bachelor's degree or above.



Public universities directly support

5,628

full-time jobs, together with an additional

21,950

jobs in other industries in South Dakota.



Approximately

67,850

people live in South Dakota because of the presence of the public university system and the accompanying economic activity.



Sales and property tax revenues are more than

\$162 MILLION

higher due to the economic activity generated by the public university system.



29.3%

of out-of-state students are placed in South Dakota jobs by the time they graduate.

All dollar amounts are annual economic impacts based on Fiscal Year 2016 data.

Introduction

Over 26,000 students are enrolled at South Dakota's six public universities,¹ and the public university system has more than 5,600 full-time employees. The economic effects of this unified system include not only the direct impact of student, employee, and university purchases, but also substantial secondary impacts as money spent circulates throughout the state economy. While not all spending stays within the state's borders, the public universities support a number of other industries within the state.

Our data come from the Board of Regents; the universities; and surveys administered to current students, alumni, and system-wide employees (faculty, staff, and administrators). We use a dynamic regional economic model to estimate the impact on the state's economy of these important constituencies.² The model accounts for money

flowing into and out of the state, as well as the impact on population from both traditional and online students. This report summarizes the quantifiable impacts of the public university system; it does not include the less-tangible benefits of higher education such as more healthful lifestyles, lower healthcare costs, reduced crime rates, increased charitable giving, and higher rates of voter participation and civic engagement. When assumptions are necessary, we are conservative with our input values so their true economic impact is likely higher than the findings we report.

In the next section, we summarize the data sources that provide the inputs for the economic model. We then provide the results of the economic impact analysis. Summaries for each of the six public universities are included at the end of the report.

I LOVE MY STATE. I ALWAYS THOUGHT THAT I WANTED TO LIVE SOMEWHERE ELSE, SO I DID... BUT I CAME BACK. IT IS WONDERFUL TO TRAVEL TO OTHER PLACES, BUT SD IS MY HOME AND THERE IS NO OTHER PLACE LIKE IT.

—CURRENT DSU STUDENT

Data

Table 1 shows the expenditures of the university system by location.³ Salaries and benefits account for approximately half of all system-wide expenditures. These expenditures cycle through the South Dakota economy as employees purchase goods and services in the state, support the state employee retirement fund and health plan, and invest in local businesses. The average employee in our survey reported spending \$14,227 in South Dakota each year, for a total of \$80 million across the system. In addition to salaries and benefits, the expenditure totals include categories such as capital outlays, maintenance and repair, and construction expenditures. The numbers we use for construction expenditures are the 5-year average since spending in this category is highly variable year-to-year.

**TABLE 1:
BOARD OF REGENTS
EXPENDITURES**

	Employment (FTEs)	Annual enrollment (Fall 2015 FTEs)	Expenditures
SYSTEM TOTAL	5,628.16	26,683.8	\$703,031,701
BHSU	436.9	2,882.5	\$51,934,403
DSU	289.4	1,858.9	\$33,956,094
NSU	368.2	1,995.2	\$40,498,174
SD MINES	520.2	2,404.6	\$64,288,009
SDSU	2,371.8	10,141.5	\$309,565,113
USD	1,581.3	7,401.1	\$185,829,389

System total category includes the BOR central office.

Table 2 (next page) shows that in-state students spend substantial amounts on housing, food, and other expenditures that are not included in tuition or fees.⁴ Annual student spending on housing and utilities in South Dakota is \$36.9 million and \$8.7 million, respectively. Food, transportation, entertainment, and clothing expenditures in the state total \$48.9 million per year. Combining all student spending categories (excluding tuition and fees), students alone spend roughly \$126.5 million a year in the South Dakota economy.

Alumni spending in the state is also a large and important contributor to economic growth, reported at close to \$1.28 billion per year in all spending categories combined. Of the alumni we surveyed, 42% live in South Dakota for at least part of the year, and 30% say attending school here was a significant factor in their decision to live here. Currently, 27.5% of South Dakotans 25 years old and older have earned a baccalaureate degree or higher.⁵













The economic impact coming from alumni that we report likely underestimates their true impact. Because alumni calculations include only alumni in the various databases for whom we have contact information, this likely undercounts the actual number of people who are spending money in the South Dakota economy. Note that the proportion of jobs requiring a college degree is likely to rise; one prominent analysis estimates that 65% of South Dakota jobs will require at least a post-secondary credential by 2020.⁶ In South Dakota, 37% of jobs will require an associate's degree or vocational certificate; 21% will require a bachelor's degree; and 7% will require a master's degree or above. This creates a greater demand for public university alumni and will result in a larger economic impact (coming from future alumni) than our calculations here suggest.

I WAS INFLUENCED TO STAY IN SOUTH DAKOTA FOR SCHOOL AND IN THE FUTURE BY THE OPPORTUNITY PROVIDED TO ME BY THE DAKOTA CORPS SCHOLARSHIP PROGRAM, WHICH IS ADMINISTERED BY THE SOUTH DAKOTA BOARD OF REGENTS. THIS SCHOLARSHIP INFLUENCED ME TO STAY IN SOUTH DAKOTA FOR AT LEAST THE NEXT NINE YEARS.

—CURRENT SD MINES STUDENT

TABLE 2: EMPLOYEE, ALUMNI, AND STUDENT EXPENDITURE DATA

	AVERAGE EMPLOYEE SPENDING (per month) 1,741 responses	AVERAGE ALUMNI SPENDING (per month) 6,664 responses	AVERAGE STUDENT SPENDING (per month) 4,020 responses
 Utilities	\$193.58	\$201.71	\$53.90
 Food	\$315.39	\$297.45	\$122.14
 Transportation	\$261.95	\$276.32	\$89.76
 Medical Expense	\$129.61	\$134.06	\$42.35
 Entertainment	\$107.96	\$143.25	\$50.77
 Childcare	\$71.59	\$56.35	-
 Books/School Supplies	-	-	\$108.69
 Clothing	\$78.06	\$97.40	\$42.44
 Other	\$147.38	\$176.78	\$51.22
 Rent/Mortgage	\$643.40	\$838.65	\$229.71
TOTAL	\$1,948.92	\$2,221.97	\$790.98

BY GOING TO SCHOOL AT SDSM&T, I WAS ABLE TO LIVE IN SOUTH DAKOTA FOR FOUR YEARS. I GREW TO ENJOY THE STATE AND HAVE TAKEN MY FAMILY ON NUMEROUS TRIPS BACK TO SD BECAUSE OF THIS. I LOOK FORWARD TO SOMEDAY LIVING IN SD AGAIN.

—SD MINES ALUMNUS

Results

Table 3 shows the economic impact for the public university system as a whole. The public universities increase South Dakota’s gross domestic product (GDP) by \$2.66 billion annually, which is about 5.9% of the state’s economy. The employment impact is also substantial. Besides the 5,628 full-time employees of the public university system, an additional 21,950 jobs in other industries in South Dakota are supported by the secondary economic activity that comes from these institutions.

Population effects are also an important consideration in South Dakota. As the economy grows, so does the opportunity for increased population. Our model predicts that over 67,000 people are living in South Dakota as a result of the direct and indirect economic activity generated by the public universities. The value of South Dakota’s residential housing stock is \$1.38 billion higher as a result of the public university system, providing an additional \$18.8 million in property tax each year.⁷ We also find that additional personal consumption increases sales tax revenue by \$143.5 million.⁸ To put this in context, the State’s investment on the public university system is currently at \$197 million.

TABLE 3: UNIVERSITY IMPACTS

 <p>GDP</p>	 <p>Employment (including direct)</p>	 <p>Population</p>
<p>\$2.66 BILLION</p>	<p>27,578 JOBS</p>	<p>67,850 PEOPLE</p>

All dollar amounts are annual economic impacts based on Fiscal Year 2016 data.

Jobs are annual full-time equivalents and include the BOR central office.

OUR HIGHER EDUCATION SYSTEM PLAYS SUCH AN IMPORTANT ROLE IN DEVELOPING TALENT AND POSITIVELY IMPACTING ECONOMIC DEVELOPMENT AND QUALITY OF LIFE INITIATIVES.

—CURRENT SDSU EMPLOYEE

Economic Impact Report

BLACK HILLS STATE UNIVERSITY

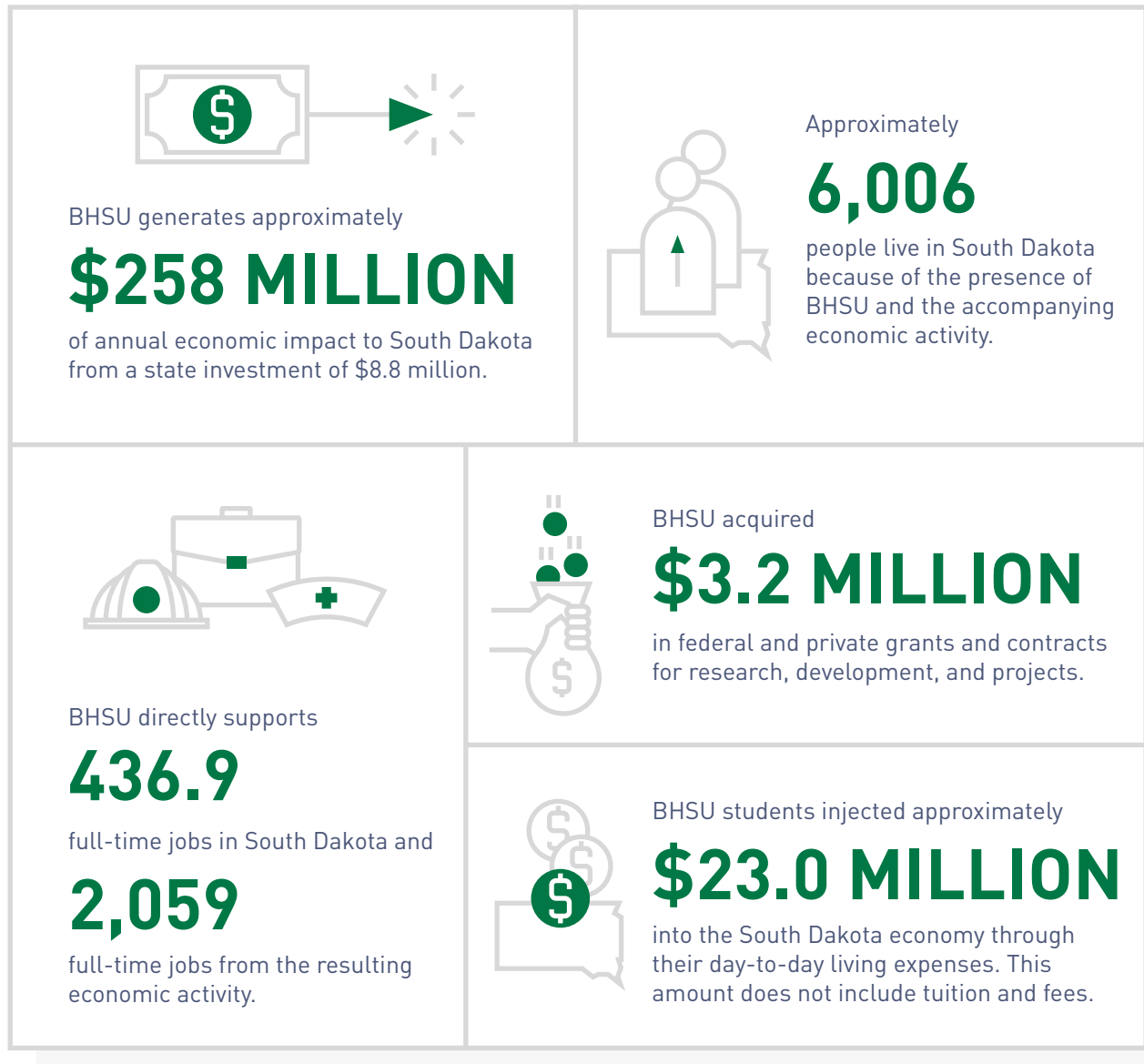


EXECUTIVE SUMMARY

Black Hills State University (BHSU) is a four-year public liberal arts institution. BHSU was founded in 1883 and offers 20 certificate, 4 associate, 46 baccalaureate, and 8 master's degree programs within 3 academic units including the College of Liberal Arts, the College of Business and Natural Sciences, and the College of Education and Behavioral Sciences. BHSU holds many regional and national accreditations.

BHSU generates the following impacts on the State of South Dakota's economy, calculated using a dynamic regional economic model.

HIGHLIGHTS INCLUDE:



Economic Impact Report

DAKOTA STATE UNIVERSITY

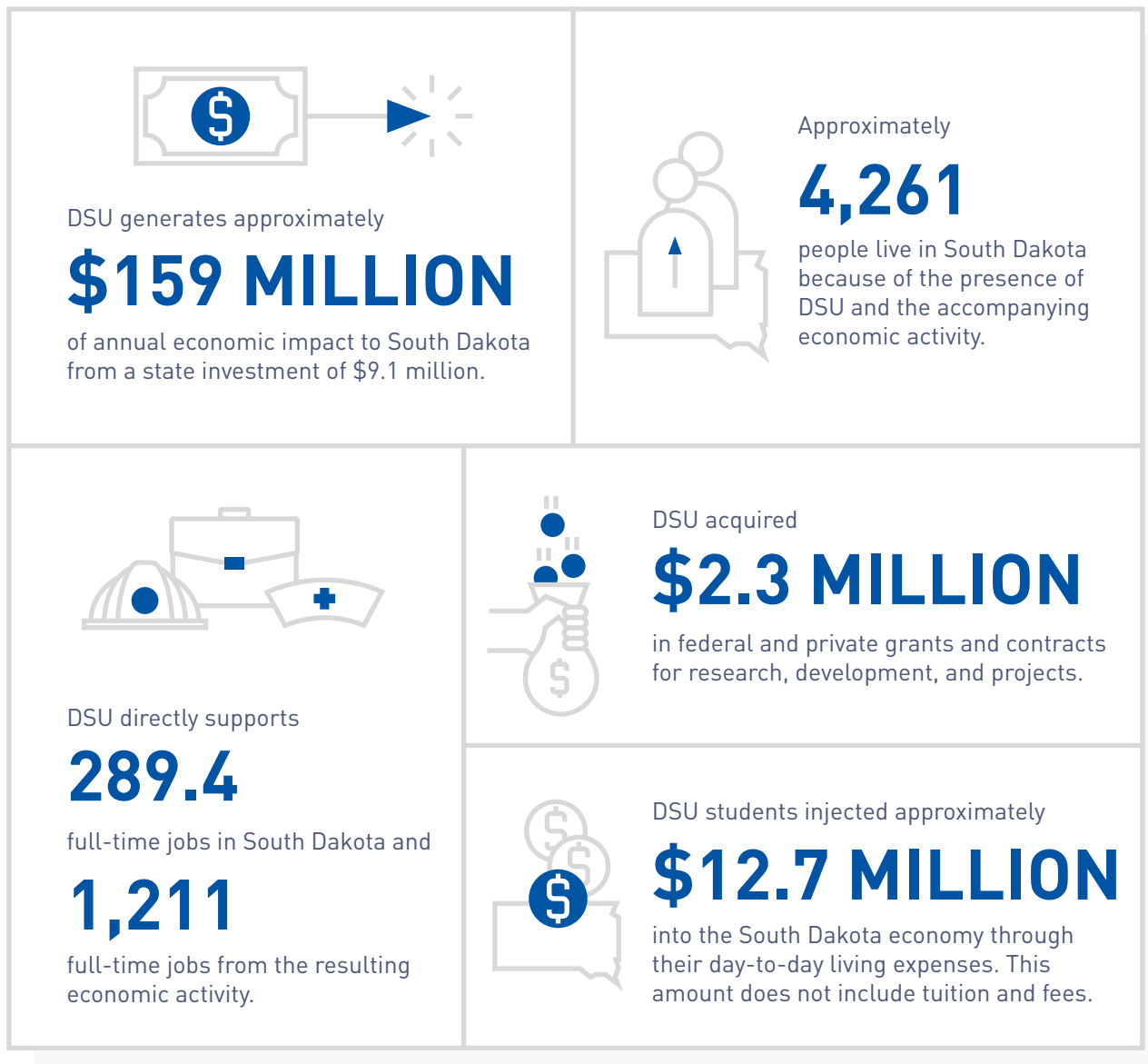


EXECUTIVE SUMMARY

Dakota State University (DSU) is a four-year public liberal arts institution. DSU was founded in 1881 and currently offers 11 certificate, 5 associate, 29 baccalaureate, 7 master's, and 2 doctoral degree programs within 4 academic units including the College of Business and Information Systems, the College of Arts and Sciences, the College of Computing, and the College of Education. DSU holds many regional and national accreditations.

DSU generates the following impacts on the State of South Dakota's economy, calculated using a dynamic regional economic model.

HIGHLIGHTS INCLUDE:



All dollar amounts are annual economic impacts based on Fiscal Year 2016 data.

Economic Impact Report

NORTHERN STATE UNIVERSITY



northern *State* university

EXECUTIVE SUMMARY

Northern State University (NSU) is a four-year, public liberal arts institution. NSU was founded in 1901 and offers 12 certificate, 7 associate, 36 baccalaureate, and 8 master's degree programs housed within 4 academic units including the College of Arts and Sciences, the School of Business, the School of Education, and the School of Fine Arts. NSU holds many regional and national accreditations.

NSU generates the following impacts on the State of South Dakota's economy, calculated using a dynamic regional economic model.

HIGHLIGHTS INCLUDE:



NSU generates approximately

\$229 MILLION

of annual economic impact to South Dakota from a state investment of \$12.9 million.



Approximately

6,270

people live in South Dakota because of the presence of NSU and the accompanying economic activity.



NSU directly supports

368.2

full-time jobs in South Dakota and

2,169

full-time jobs from the resulting economic activity.



NSU acquired

\$2.2 MILLION

in federal and private grants and contracts for research, development, and projects.



NSU students injected approximately

\$13.3 MILLION

into the South Dakota economy through their day-to-day living expenses. This amount does not include tuition and fees.

Economic Impact Report

SOUTH DAKOTA SCHOOL OF
MINES & TECHNOLOGY



EXECUTIVE SUMMARY

South Dakota School of Mines & Technology (SD Mines) is a four-year, PhD-granting research, engineering, and technology university. SD Mines was founded in 1885 and offers 8 certificate, 1 associate, 16 baccalaureate, 14 master's, and 9 doctoral degree programs.

SD Mines generates the following impacts on the State of South Dakota's economy, calculated using a dynamic regional economic model.

HIGHLIGHTS INCLUDE:



SD Mines generates approximately

\$238 MILLION

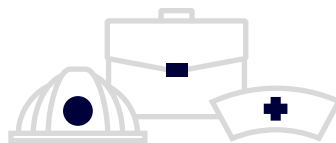
of annual economic impact to South Dakota from a state investment of \$16.3 million.



Approximately

5,995

people live in South Dakota because of the presence of SD Mines and the accompanying economic activity.



SD Mines directly supports

520.2

full-time jobs in South Dakota and

1,981

full-time jobs from the resulting economic activity.



SD Mines acquired

\$11.5 MILLION

in federal and private grants and contracts for research, development, and projects.



SD Mines students injected approximately

\$16.2 MILLION

into the South Dakota economy through their day-to-day living expenses. This amount does not include tuition and fees.

Economic Impact Report

SOUTH DAKOTA STATE UNIVERSITY



SOUTH DAKOTA
STATE UNIVERSITY

EXECUTIVE SUMMARY

South Dakota State University (SDSU) is South Dakota's land-grant comprehensive research and teaching PhD-granting university founded in 1881. SDSU is recognized by the Carnegie Foundation as a high activity research university and offers 27 certificate, 4 associate, 78 baccalaureate, 35 master's, and 17 doctoral degree programs within 8 academic units including the College of Agriculture and Biological Sciences, the College of Arts and Science, the College of Education and Human Sciences, the College of Engineering, the College of Nursing, the College of Pharmacy, the Graduate School, and the Honors College. SDSU holds many regional and national accreditations.

SDSU generates the following impacts on the State of South Dakota's economy, calculated using a dynamic regional economic model.

HIGHLIGHTS INCLUDE:



SDSU generates approximately

\$963 MILLION

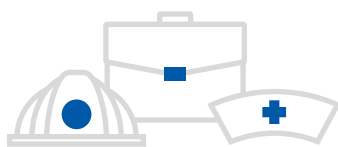
of annual economic impact to South Dakota from a state investment of \$64.0 million.



Approximately

23,548

people live in South Dakota because of the presence of SDSU and the accompanying economic activity.



SDSU directly supports

2,371.8

full-time jobs in South Dakota and

7,554

full-time jobs from the resulting economic activity.



SDSU acquired

\$40.1 MILLION

in federal and private grants and contracts for research, development, and projects.



SDSU students injected approximately

\$70.0 MILLION

into the South Dakota economy through their day-to-day living expenses. This amount does not include tuition and fees.

Economic Impact Report

UNIVERSITY OF SOUTH DAKOTA



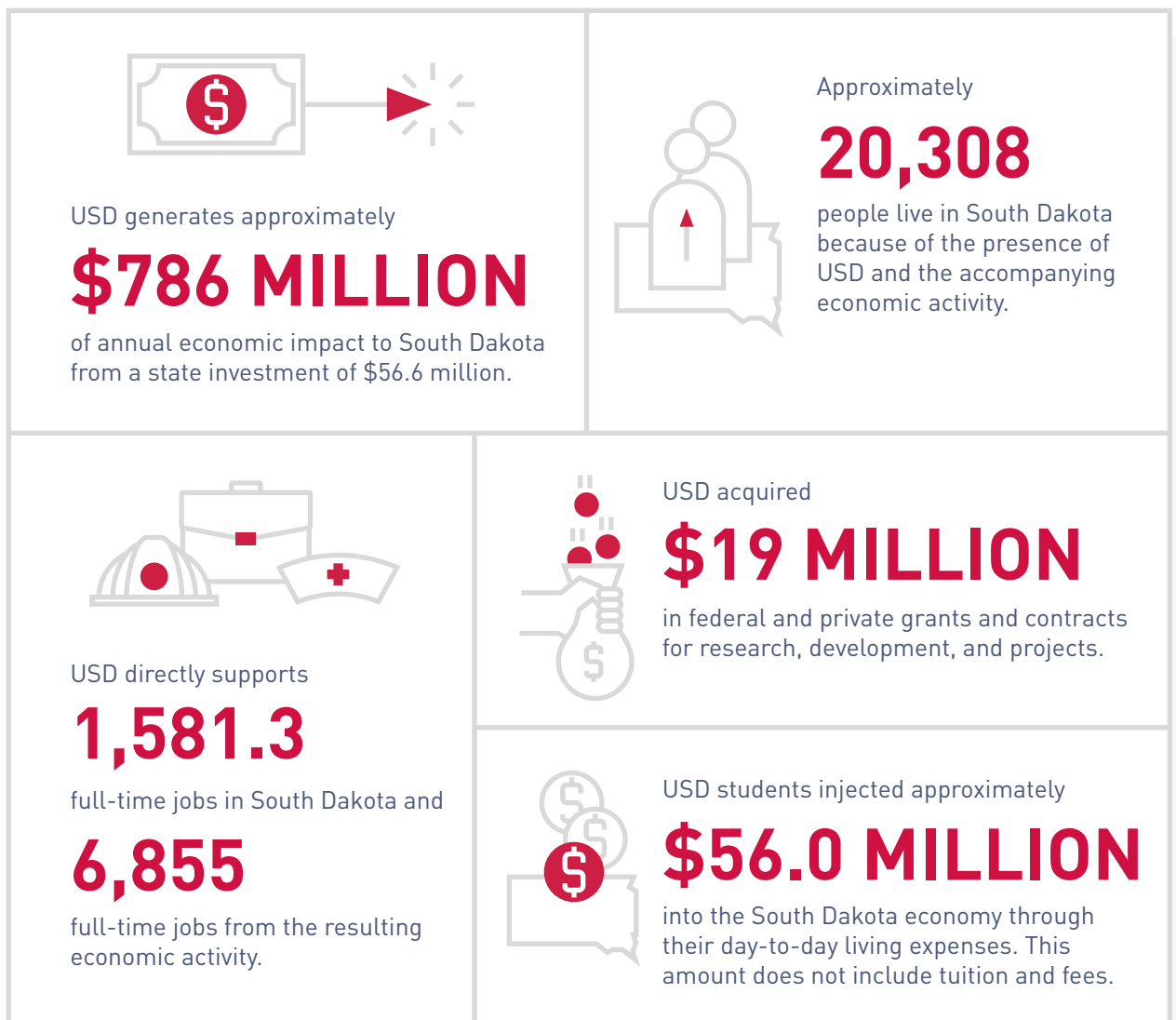
UNIVERSITY OF
SOUTH DAKOTA

EXECUTIVE SUMMARY

The University of South Dakota (USD) is South Dakota's liberal arts and professional research university with professional schools in business, law, and medicine. USD was founded in 1862 and offers 22 certificate, 3 associate, 54 baccalaureate, 38 master's, and 18 doctoral degree programs in addition to graduate education specialist degrees and terminal degrees in law and medicine within 8 academic units including the College of Arts and Sciences, the Beacom School of Business, the School of Education, the College of Fine Arts, the Graduate School, the School of Law, the Sanford School of Medicine, and the School of Health Sciences. USD holds many regional and national accreditations.

USD generates the following impacts on the State of South Dakota's economy, calculated using a dynamic regional economic model.

HIGHLIGHTS INCLUDE:



All dollar amounts are annual economic impacts based on Fiscal Year 2016 data.

Appendix: Selected Stakeholder Comments⁹

FROM ALUMNI:

“Attending USD led to meeting the individual who would be my spouse. He had a business in South Dakota, and I was able to find a position in the same town, so we stayed.”

“By going to school at SDSM&T, I was able to live in South Dakota for four years. I grew to enjoy the state and have taken my family on numerous trips back to SD because of this. I look forward to someday living in SD again.”

“After living, attending school, and working elsewhere for several years, we moved back to SD because it is a better place to raise children, and we would like to give our children the same opportunities to attend affordable and high-quality higher education. Our kids will be encouraged to attend public SD universities when they graduate high school.”

“I spent my entire undergraduate career at Northern. It was at Northern that I discovered my passions, but I also learned who I was as a person. Everything just lined up perfectly: the opportunities at school, the professors, and even just living in the city of Aberdeen. I graduated several years ago. Since then I have traveled and worked all over the country. Everywhere I live, I still compare it to Aberdeen and how much Northern helped to put me on the right path.”

FROM EMPLOYEES:

“As a graduate of DSU, I have the amazing opportunity to continue to pay forward the opportunities and personal encouragement and support I experienced during my days as a student. Two of my four children are alums of this institution as well and continue serving in SD public schools.”

“South Dakota State University has been a wonderful place to work and its progressive growth has continued to make me want to stay. Our higher education plays such an important role in developing talent and positively impacting economic development and quality of life initiatives. Without a strong public university system, I would not continue to live here or have the ability to hire the most talented people to work here.”

FROM STUDENTS:

"I love my state, and I believe that the South Dakota public university system is a powerful way to create individuals of higher education that will bring a great level of commitment and betterment to our state. I knew that pursuing my education in South Dakota would keep me close to home and bring business to my state. I am proud to say that I believe that I will be able to contribute to my state by living, learning, and working all in South Dakota. I believe that the South Dakota public university system should continue to prioritize education for South Dakota residents as a way to continue to improving our state."

"The nursing program available in Rapid City was a perfect fit—the outdoor activities available were necessary for our lifestyle. I would recommend SD schools to anyone looking for higher education."

"I find the quality of education at the Universities to be exemplary."

"I love my state. I always thought that I wanted to live somewhere else, so I did... but I came back. It is wonderful to travel to other places, but SD is my home and there is no other place like it."

"I was influenced to stay in South Dakota for school and in the future by the opportunity provided to me by the Dakota Corps Scholarship Program, which is administered by the South Dakota Board of Regents. This scholarship influenced me to stay in South Dakota for at least the next nine years."

"It was very easy to get help about any questions I had from BHSU. The fun, adventurous, and small community culture at BHSU encouraged me to move to South Dakota."

"The opportunity to study in my great state is incredible. I've studied at Northern State University, at the University Center in Sioux Falls, and I'll be studying at South Dakota State University after this semester. I'm extremely excited to be able to attend school here. South Dakota will always be home even if I move to another state."

Endnotes

¹ Full-Time Equivalent (FTE). This does not fully count the impact of part-time students, but is used instead of headcount, which would double count students enrolled at multiple universities.

² Some economic impact analyses rely on spending models that use a multiplier. While these models are simpler, they are also more arbitrary and less reliable. Instead of a multiplier model, this study uses the Policy Insight model developed by Regional Economic Models, Inc. (REMI). In addition to being a traditional input-output model, REMI uses both computational general equilibrium modeling and econometric modeling to account for inter-industry relationships, regional price differences, and geographical constraints.

³ SDSU figures include both the Agricultural Experiment Station and SDSU Extension. USD figures include the Sanford School of Medicine. This study does not include the South Dakota School for the Deaf or the South Dakota School for the Blind and Visually Impaired.

⁴ The economic impact of tuition and fees occurs through the universities' use of those funds, so it is not included as a student expenditure impact. This avoids double-counting.

⁵ South Dakota Dashboard, Educational Attainment, <http://www.southdakotadashboard.org/educational-attainment#0-6734-g>

⁶ From "Recovery: Job Growth and Education Requirements through 2020. State Report" by Carnevale, Smith, and Strohl. Georgetown University Public Policy Institute, Center on Education and the Workforce.

⁷ Property tax calculated at 1.36%, the average value in South Dakota.

⁸ This is additional revenue from the 4.5% sales tax. Additional sales tax revenues at the county or city level are not included in this figure.

⁹ These are selected comments compiled from respondents of the Employee, Alumni, and Student surveys. Comments are edited for grammar and spelling only; not a complete list.



UNIVERSITY OF
SOUTH DAKOTA
BEACOM SCHOOL OF BUSINESS

ABOUT THE BEACOM SCHOOL OF BUSINESS

USD's Beacom School of Business was established in 1927 and has been accredited by the Association to Advance Collegiate Schools of Business (AACSB) since 1949. The leading business school in the region, Beacom's programs are consistently ranked among the top business schools in the nation by Princeton Review, U.S. News & World Report and others for its high-quality learning experience, student success, affordability, and high-caliber of faculty and students. Whether a student chooses face-to-face or online courses, Beacom's programs emphasize real-world experience through professional organizations, quality internships and capstone projects.



300 copies of this publication were printed at USD at a cost of \$4.01 per piece.