



The Economic Value of Iowa's Regent Universities

IOWA'S REGENT UNIVERSITIES¹ create value in many ways. The universities play a key role in helping students increase their employability and achieve their individual potential. The universities facilitate new research and economic developments and also draw visitors and students to the state, generating new dollars and opportunities for Iowa. Extension and Outreach is actively engaged in providing research-based education and information to improve lives of Iowans in all 99 counties. They provide students with the education, training, and skills they need to have fulfilling and prosperous careers. Their student, employee, and university-coordinated community volunteers support the state economy through the output and employment generated by state businesses and organizations. Furthermore, the universities are places for students to meet new people, increase their self-confidence, and promote their overall health and well-being.

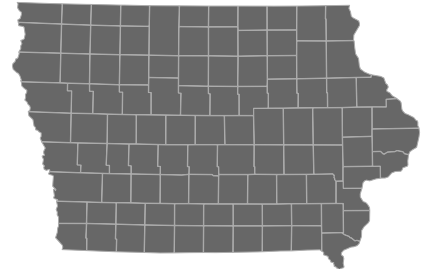
Iowa's regent universities influence both the lives of students and the state economy. The universities support a variety of industries in Iowa, serve state businesses, and benefit society as a whole in Iowa from an expanded economy and improved quality of life. Additionally, the benefits created by Iowa's regent universities extend to the state and local government through increased tax revenues and public sector savings.

This study measures the economic impacts created by Iowa's regent universities on the business community and the benefits the universities generate in return for the investments made by their 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 universities, for fiscal year (FY) 2021-22. Impacts on the Iowa 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 Iowa are reported under the investment analysis



IOWA

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¹ Iowa's regent universities consist of the following universities: Iowa State University of Science and Technology, the University of Iowa, and the University of Northern Iowa.



Iowa's regent universities promote economic growth in Iowa through their direct expenditures and the resulting expenditures of visitors, students, and state businesses. The universities serve as employers and buyers of goods and services for their day-to-day, construction, University of Iowa (UI) Hospitals & Clinics, and research operations. The universities' Extension and Outreach activities help state and local businesses and organizations succeed as well as improve the lives of Iowans. Numerous start-up and spin-off companies have formed as a result of programs and knowledge at the universities. The universities' activities attract visitors and students from outside Iowa, whose expenditures benefit state vendors. The universities encourage their students and employees to volunteer in the community, helping businesses and organizations grow. In addition, the universities are primary sources of higher education to Iowa residents and suppliers of trained workers to state industries, enhancing overall productivity in the state workforce.

Operations spending impact



Iowa's regent universities add economic value to Iowa as employers of state residents and large-scale buyers of goods and services. In FY 2021-22, the universities employed 32,998 full-time and part-time faculty and staff (including graduate assistants and student employees but excluding hospital, clinic, and research employees), 98% of whom lived in Iowa. Total payroll for these employees was \$1.9 billion² (excluding payroll from UI Hospitals & Clinics and research employees), much

² Includes royalty payments to inventors related to the universities who still live in Iowa.



of which was spent in the state for household and living expenses, including groceries, mortgage and rent payments, and dining out.. In addition, the universities spent \$635.7 million on day-to-day expenses related to facilities, supplies, and professional services (excluding construction, UI Hospitals & Clinics, and research expenditures).

The universities' day-to-day operations spending added \$2.3 billion in income to the state during the analysis year. This figure represents the universities' payroll, the multiplier effects generated by the in-state spending of the universities and their employees, and a downward adjustment to account for funding that the universities received from state sources. The \$2.3 billion in added income is equivalent to supporting 37,145 jobs in the state.

Construction spending impact



The universities invest in construction each year to maintain their facilities, create additional capacities, and meet their growing educational demands.

While the amount varies from year to year, these quick infusions of income and jobs have a substantial impact on the state economy. In FY 2021-22, the universities' construction spending generated \$117.8 million in added income, which is equivalent to supporting 1,567 jobs.

UI Hospitals and Clinics spending impact



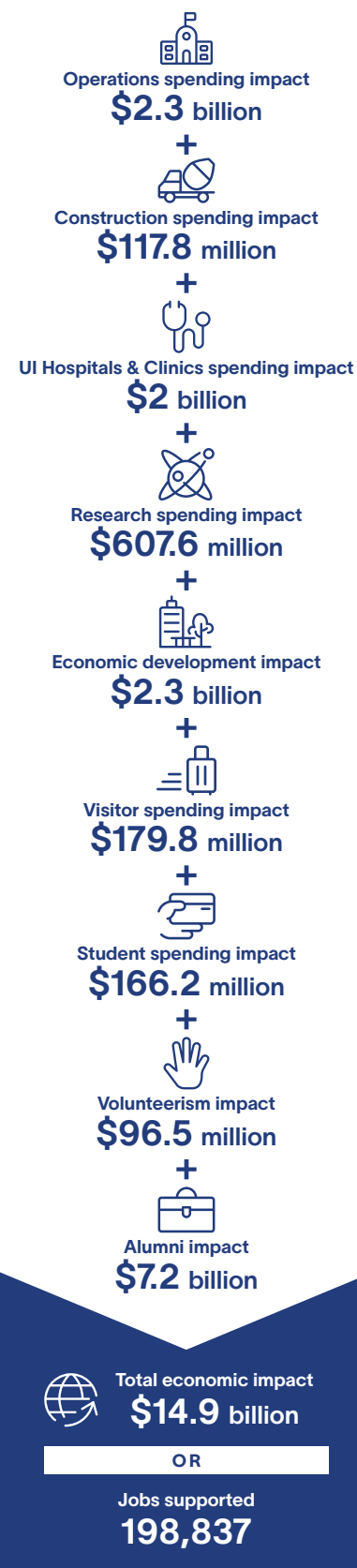
The UI Hospitals & Clinics, including the Iowa River Landing, University of Iowa Stead Family Children's Hospital, and pharmacy locations, would not exist without the university. The UI Hospitals & Clinics provide a hands-on learning and research environment for students and employs thousands of workers. Although broader health-related impacts are outside the scope of this analysis, the UI Hospitals & Clinics is known for providing quality patient care.

Digital Diagnostics helps identify diseases of thousands of patients

Digital Diagnostics has raised \$130 million in venture capital, making it one of the most successful recent commercial outgrowths of University of Iowa research. In April 2018, Digital Diagnostics (formerly known as IDx) became the first company to ever receive FDA clearance for an AI diagnostic platform that makes a diagnosis without physician input at the point-of-care. This achievement did not happen overnight—it was the culmination of decades of research by founder Dr. Michael Abramoff on automated image analysis, combined with decades of research on how clinicians diagnose disease. Digital Diagnostics is in use at over 20 health systems and its customers have tested thousands of patients and identified hundreds of patients with disease who were previously undiagnosed.

In FY 2021-22, the UI spent over \$2.1 billion on hospital and clinic operations. These expenditures added a net impact of \$2 billion in added income to the state. This is equivalent to supporting 25,673 jobs.

Impacts created by Iowa's regent universities in FY 2021-22*



* This table excludes the positive impacts of the universities' Extension and Outreach activities.



Research spending impact



Research activities impact the economy by employing people and requiring the purchase of equipment and other supplies and services. Over the last four years, the universities received 1,071 invention disclosures, filed 807 new patent applications, and produced 360 licenses.

In FY 2020-21, the universities spent \$360.9 million on payroll to support research activities. This, along with \$309.7 million in other research spending,³ created a net total of \$607.6 million in added income for the state economy. This added income is equivalent to supporting 8,880 jobs. Note that at the time of this study, FY 2021-22 research expenditure data were being verified, so FY 2020-21 research expenditure data were used as the reference. Actual FY 2021-22 research awards are equal to or higher than FY 2020-21.

Iowa's regent universities' research developments

Fiscal year	Inventions	Patents	Licenses
2018-19	259	208	95
2019-20	281	198	85
2020-21	291	176	95
2021-22	240	225	85
Total	1,071	807	360

Source: Iowa's regent universities.

Value of Extension and Outreach



Extension and Outreach activities strengthen communities and their local economies by enhancing leadership structures, broadening engagement, teaching best practices, and providing hands-on assistance. Communities are empowered to shape their own futures through research, education, community engagement, economic development, and community planning and design. Over the years, the Extension and Outreach offices have helped more than 6,500 companies and organizations across the state. The offices have also helped tens of thousands of Iowa

ISU's Extension and Outreach helping prevent foodborne illness through education

Iowa's Food Code requires at least one supervisory employee in licensed food services to be certified in food safety through an approved program. In 2021, 2,033 Iowans participated in ServSafe classes taught by Human Sciences extension specialists, with 77% successfully earning the Certified Food Protection Manager credential. Servsafe is the National Restaurant Association Educational Foundation's internationally recognized food safety certification program, providing food service workers with the knowledge they need to protect the public from foodborne illnesses.

³ Excludes indirect costs because indirect costs are not necessarily spent during the analysis year.

farmers. Due to the specific nature of these Extension and Outreach activities, Light-cast does not attempt to measure an impact. With that said, the value that these Extension and Outreach activities offer for state and local communities should be acknowledged.

Economic development impact



The universities create an exceptional environment that fosters innovation and entrepreneurship, evidenced by the number of start-up and spin-off companies related to the universities and companies that have grown in the state with the support of the universities. Start-up companies, created specifically to license and commercialize the universities' technology or knowledge, have a strong and clearly defined link to the universities. Spin-off companies, created and fostered through the universities' programs or faculty and alumni, have a clear but weaker link to the universities. In addition, companies that benefited from the universities' Small Business Development Centers (SBDCs), Advance Iowa (a University of Northern Iowa consulting program), and Iowa State University's Center for Industrial Research and Service (CIRAS) are included under spin-off companies.⁴

In FY 2021-22, start-up and spin-off companies related to Iowa's regent universities added \$2.3 billion in income to the Iowa economy, which is equivalent to supporting 18,468 jobs. Of this added income, \$207.8 million was due to the start-up companies, with the remainder due to spin-off companies.⁵

Visitor spending impact



Hundreds of thousands of visitors from outside the state were attracted to the universities during the analysis year to attend commencement, sports events, and other activities sponsored by the universities. While in the state, visitors spent money for lodging, food, transportation, and other personal expenses. The off-campus expenditures of the universities' out-of-state visitors generated a net impact of \$179.8 million in added income for the state economy in FY 2021-22. This \$179.8 million in added income is equivalent to supporting 4,263 jobs.

Student spending impact



Around 38% of students attending the universities originated from outside the state in FY 2021-22. While some of these students continued to live outside the state, many relocated to Iowa to attend the universities. These students may not have come to the state if the universities did not exist. In addition, some in-state students, referred to as retained students, would have left Iowa if not for the existence of Iowa's regent universities. While attending the universities, these relocated and retained students spent money on groceries, accommodation, transportation, and

⁴ The number of employees included is limited to the employees hired as a direct result of the spin-off companies and the growth in employees at companies supported by the SBDCs, Advance Iowa, and CIRAS.

⁵ To maintain an acceptable level of data reliability, this impact is limited to those companies that were created or supported by the universities after FY 2011-12 and were still active in Iowa in FY 2021-22.



other household expenses. This spending generated \$166.2 million in added income for the state economy in FY 2021-22, which supported 3,207 jobs in Iowa.

Volunteerism impact



Iowa's regent universities encourage their students and employees to volunteer in Iowa, where they can work with businesses and organizations to help meet their goals. The universities also work with community members to coordinate volunteer activities. The work of these student, employee, and university-coordinated community volunteers allows businesses and organizations to grow, increasing their output and impacting the economy at large. Using the value per volunteer hour for Iowa as provided by the Independent Sector,⁶ the work of the universities' student, employee, and university-coordinated community volunteers is equivalent to \$49.8 million in earnings. In terms of actual impact to the Iowa economy, student, employee, and university-coordinated community volunteers generated an impact of \$96.5 million in added income for the state in FY 2021-22, equivalent to supporting 3,906 jobs.⁷

Annual Back Packin' the Dome day of service

One thousand volunteers from around the Cedar Valley, including University of Northern Iowa (UNI) students, filled the UNI-Dome's field on Martin Luther King Jr. Day to pack backpacks to serve food-insecure children in Northeast Iowa during the annual Back Packin' the Dome event.

In three 90-minute shifts, packing nearly 48,000 backpacks of nutritious food was completed. This supports Feeding America's local division of the Backpack Program which ensures Northeast Iowa children enrolled in 145 schools have plenty of nutritious food to eat on weekends and times they may not be able to rely on school meal programs.

The annual day of service is a partnership between UNI, the Office of Community Engagement, Panther Pantry (UNI's food bank for students), and AmeriCorps. All these organizations come together to support the work started by the Volunteer Center of Cedar Valley and the Northeast Iowa Food Bank.

Alumni impact



The education and training the universities provide for state residents has the greatest impact. Since the universities were established, students have studied at them and entered the state workforce with greater knowledge and new skills. Today, hundreds of thousands of former students of Iowa's regent universities are employed in Iowa. As a result of their education from the universities, the students receive higher earnings and increase the productivity of the businesses that employ them. In FY 2021-22, alumni of Iowa's regent universities generated \$7.2 billion in added income for the state economy, which is equivalent to supporting 95,729 jobs.

⁶ By state value per volunteer hour was provided by Independent Sector (see https://independentsector.org/resource/vovt_details/).

⁷ The impact of volunteerism is grossly undercounted because the number of volunteer hours was self-reported to the universities and only includes a small sample of the universities' volunteers.



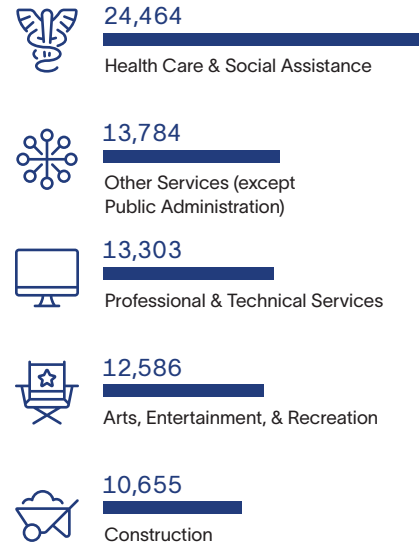
Total impact

Iowa's regent universities added \$14.9 billion in income to the Iowa economy during FY 2021-22, equal to the sum of the operations, construction, UI Hospitals & Clinics, and research spending impacts; the economic development impact; the visitor and student spending impacts; the volunteerism impact; and the alumni impact. The \$14.9 billion impact does not include the value that the universities' Extension and Outreach activities are adding to the state and local communities. For context, the \$14.9 billion impact was equal to approximately 7.1% of the total gross state product (GSP) of Iowa. This contribution that the universities provided on their own is larger than the entire Health Care & Social Assistance industry in the state.

The total impact of Iowa's regent universities can also be expressed in terms of jobs supported. The \$14.9 billion impact supported 198,837 state jobs, using the jobs-to-sales ratios specific to each industry in the state. This means that one out of every 10 jobs in Iowa is supported by the activities of the universities and their students. In addition, the \$14.9 billion, or 198,837 supported jobs, stemmed from different industry sectors. Among non-education industry sectors, the universities' spending and alumni in the Health Care & Social Assistance industry sector supported 24,464 jobs in FY 2021-22. If the universities did not exist, these impacts would not have been generated in Iowa.

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Impact of Iowa's regent universities by industry (jobs supported)





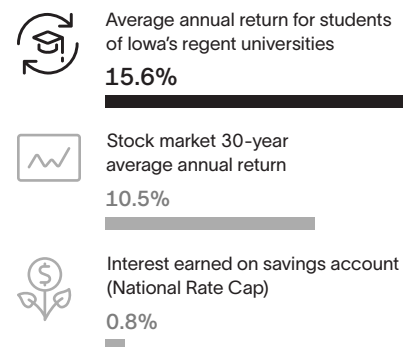
An investment analysis evaluates the costs associated with a proposed venture against its expected benefits. If the benefits outweigh the costs, then the investment is financially worthwhile. The analysis presented here considers Iowa's regent universities as an investment from the perspectives of students,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

Student perspective

 The universities reported a fall enrollment of 69,849 students in 2021. Expanding to the entire FY 2021-22, Iowa's regent universities served more than 76,000 students. In order to attend the universities, 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 the universities' students in FY 2021-22 amounted to a present value of \$1.4 billion, equal to \$879.1 million in out-of-pocket expenses (including future principal and interest on student loans) and \$517.7 million in forgone time and money.

In return for their investment, students of Iowa's regent universities will receive a stream of higher future earnings that will continue to grow throughout their working lives. For example, the average bachelor's degree graduate from FY 2021-22 will see annual earnings that are \$23,200 higher than a person with a high school diploma or equivalent working in Iowa. Over a working lifetime, the benefits of the bachelor's degree over a high school diploma will amount to an undiscounted value of \$1 million

Students see a high rate of return for their investment in Iowa's regent universities

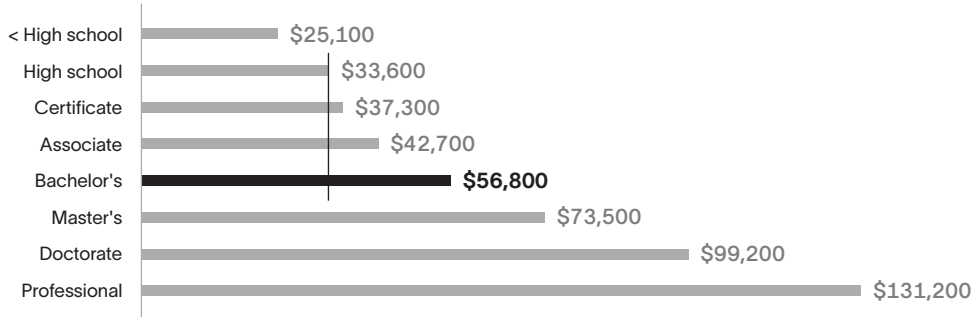


Source: Forbes' S&P 500, 1992-2021. FDIC.gov, 2-2022.

in higher earnings per graduate. The present value of the cumulative higher future earnings that the universities' FY 2021-22 students will receive over their working careers is \$7.5 billion.

The students' benefit-cost ratio is 5.4. In other words, for every dollar students invest in their education at the universities in the form of out-of-pocket expenses and forgone time and money, they will receive a cumulative value of \$5.40 in higher future earnings. Annually, the students' investment in the universities has an average annual internal rate of return of 15.6%, which is impressive compared to the U.S. stock market's 30-year average rate of return of 10.5%.

The average bachelor's degree graduate from Iowa's regent universities will see an increase in earnings of **\$23,200** each year compared to a person with a high school diploma or equivalent working in Iowa.



Source: Lightcast employment data.

Taxpayer perspective⁸



Iowa's regent universities generate more in tax revenue than they receive.

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 the universities' students 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 2021-22 students' working lives, the state and local government will have collected a present value of \$1.6 billion in added taxes.

Benefits to taxpayers will also consist of savings generated by the improved lifestyles of the universities' students and the corresponding reduced government services. Education is statistically correlated with a variety of lifestyle changes. The education that the universities' students receive will generate savings in three main categories: 1) healthcare, 2) justice system, and 3) income assistance. Improved health will lower students' demand for national health care services. In addition, costs related to the justice system will decrease. Iowa public universities' students will be more employable, so their reduced demand for income

For every dollar of public money invested in Iowa's regent universities, taxpayers will receive a cumulative value of **\$2.70** over the course of the students' working lives.

⁸ The modeling approach used for the taxpayer and social investment analyses centers on the benefits and costs arising from the UI's core mission—educating students. As such, it does not consider the taxpayer or social benefits arising from the UI Hospitals & Clinics' provision of healthcare to Iowans and the study removes the operational costs and benefits of the UI Hospitals & Clinics from its analysis.

assistance such as welfare and unemployment benefits will benefit taxpayers. For a list of study references, contact the Board of Regents, State of Iowa for a copy of the main report. Altogether, the present value of the benefits associated with an education will generate \$256.2 million in savings to state and local taxpayers.

Total taxpayer benefits amount to \$1.8 billion, the present value sum of the added taxes and public sector savings. Taxpayer costs are \$675.3 million, equal to the amount of state government funding Iowa's regent universities received in FY 2021-22. These benefits and costs yield a benefit-cost ratio of 2.7. This means that for every dollar of public money invested in Iowa's regent universities in FY 2021-22, taxpayers will receive a cumulative present value of \$2.70 over the course of the students' working lives. The average annual internal rate of return for taxpayers is 6.4%, which compares favorably to other long-term investments in the public and private sectors.

Social perspective



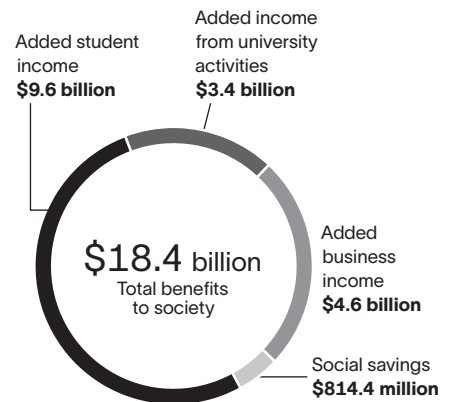
Society as a whole in Iowa benefits from the presence of Iowa's regent universities in two major ways. Primarily, society benefits from an increased economic base in the state. This is attributed to the added income from students' increased lifetime earnings (added student income), added income from university activities, and increased business output (added business income), which raise economic prosperity in Iowa.

Benefits to society also consist of the savings generated by the improved lifestyles of the universities' 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. Justice system savings include avoided costs to the government and society due to less judicial activity. Income assistance savings include reduced welfare and unemployment claims. For a list of study references, contact the Board of Regents, State of Iowa for a copy of the main report.

Altogether, the social benefits of Iowa's regent universities equal a present value of \$18.4 billion. These benefits include \$9.6 billion in added student income, \$4.6 billion in added business income, \$3.4 billion in added income from the universities' activities, as well as \$814.4 million in social savings related to health, the justice system, and income assistance in Iowa. People in Iowa invested a present value total of \$4.1 billion in Iowa's regent universities in FY 2021-22. The cost includes all the universities' expenditures and student costs.

The benefit-cost ratio for society is 4.4, equal to the \$18.4 billion in benefits divided by the \$4.1 billion in costs. In other words, for every dollar invested in Iowa's regent universities, people in Iowa will receive a cumulative value of \$4.40 in benefits. The benefits of this investment will occur for as long as the universities' FY 2021-22 students remain employed in the state workforce.

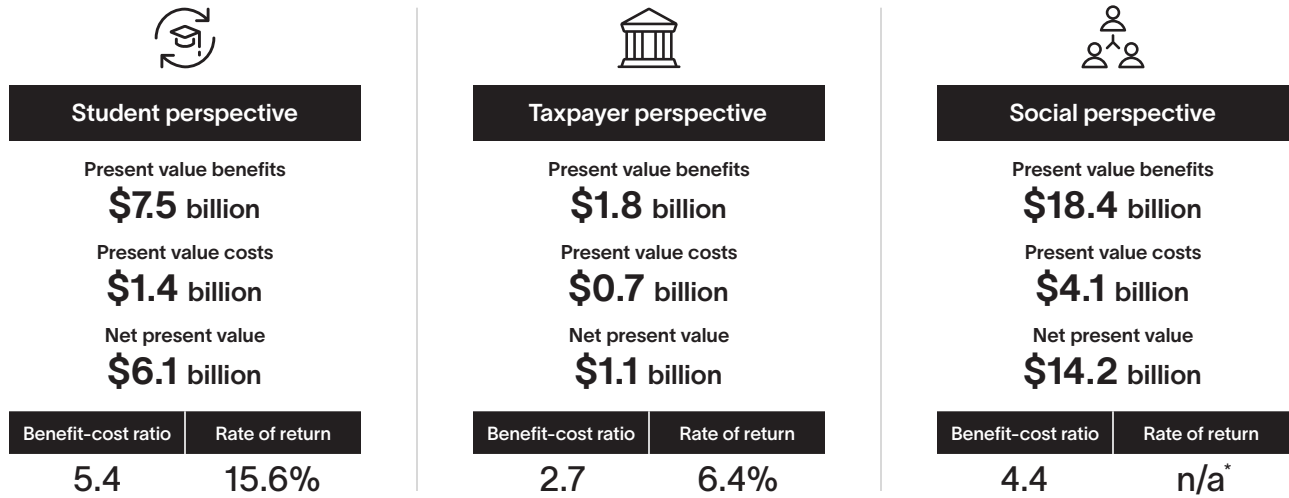
Social benefits in Iowa from Iowa's regent universities



Source: Lightcast impact model.

Summary of investment analysis results

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



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



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Conclusion

The results of this study demonstrate that Iowa's regent universities create value from multiple perspectives. The universities benefit state businesses by increasing consumer spending in the state and supplying a steady flow of qualified, trained workers to the workforce. Iowa's regent universities enrich the lives of students by raising their lifetime earnings and helping them achieve their individual potential. The universities benefit state and local taxpayers through increased tax receipts and a reduced demand for government-supported social services. Finally, Iowa's regent universities benefit society as a whole in Iowa 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 2021-22 academic and financial reports from the universities, industry and employment data from the U.S. Bureau of Labor Statistics and U.S. Census Bureau, outputs of Lightcast'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 Board of Regents, State of Iowa for a copy of the main report.

The results of this study demonstrate that Iowa's regent universities create value from **multiple perspectives**.



Lightcast provides colleges and universities with labor market data that help create better outcomes for students, businesses, and communities. Our data, which cover more than 99% of the U.S. workforce, are compiled from a wide variety of government sources, job postings, and online profiles and résumés. Hundreds of institutions use Lightcast to align programs with regional needs, drive enrollment, connect students with in-demand careers, track their alumni's employment outcomes, and demonstrate their institution's economic impact on their region. Visit lightcast.io/solutions/education to learn more or connect with us.