



YOUNGSTOWN
STATE
UNIVERSITY

Executive Summary

MAY 2023



The Economic Value of Youngstown State University



YOUNGSTOWN STATE UNIVERSITY (YSU) creates value in many ways. The university plays a key role in helping students increase their employability and achieve their individual potential. The university facilitates new research and company developments and also draws visitors and students to the region, generating new dollars and opportunities for the YSU Service Region.¹ YSU provides students with the education, training, and skills they need to have fulfilling and prosperous careers. Its student and employee volunteers support the regional economy through the output and employment generated by regional businesses and organizations. Furthermore, YSU is a place for students to meet new people, increase their self-confidence, and promote their overall health and well-being.

YSU influences both the lives of its students and the regional economy. The university supports a variety of industries in the YSU Service Region, serves regional businesses, and benefits society as a whole in Ohio from an expanded economy and improved quality of life. Additionally, the benefits created by YSU extend to the state and local government through increased tax revenues and public sector savings.

This study measures the economic impacts created by YSU on the business community and the benefits 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 employee, student, and financial data, provided by the university, for fiscal year (FY) 2021-22. Impacts on the YSU Service Region 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 Ohio are reported under the investment analysis.



YSU influences both the **lives of its students** and the **regional economy**.

¹ For the purposes of this analysis, the YSU Service Region is comprised of Columbiana, Mahoning, and Trumbull Counties in Ohio as well as Lawrence and Mercer Counties in Pennsylvania.



YSU promotes economic growth in the YSU Service Region through its direct expenditures and the resulting expenditures of visitors, students, and regional businesses. The university serves as an employer and buyer of goods and services for its day-to-day, construction, and research operations. Numerous start-up companies have formed as a result of programs and knowledge at YSU. The university's reputation and activities attract visitors and students from outside the YSU Service Region, whose expenditures benefit regional vendors. YSU encourages its students and employees to volunteer in the community, helping businesses and organizations grow. In addition, YSU is a primary source of higher education to the YSU Service Region residents and a supplier of trained workers to regional industries, enhancing overall productivity in the regional workforce.

Operations spending impact



YSU adds economic value to the YSU Service Region as an employer of regional residents and a large-scale buyer of goods and services. In FY 2021-22, the university employed 3,126 full-time and part-time faculty and staff, including student employees (excluding research employees), 87% of whom lived in the YSU Service Region. Total payroll at YSU was \$118.6 million (excluding payroll from research employees), much of which was spent in the region for groceries, mortgage and rent payments, dining out, and other household expenses. In addition, the university spent \$63.4 million on day-to-day expenses related to facilities, supplies, and professional services (excluding construction and research expenditures).

YSU's day-to-day operations spending added \$141.2 million in income to the region during the analysis year. This figure represents the university's payroll, the multiplier effects generated by the in-region spending of the university and its employees, and a downward adjustment to account for funding that the university received from regional sources. The \$141.2 million in added income is equivalent to supporting 3,316 jobs in the region.

Construction spending impact



YSU invests in construction each year to maintain its facilities, create additional capacities, and meet its growing educational demands. While the amount varies from year to year, these quick infusions of income and jobs have a substantial impact on the regional economy. In FY 2021-22, YSU's construction spending generated \$3.9 million in added income, which is equivalent to supporting 57 jobs.



Research spending impact



Research activities impact the economy by employing people and requiring the purchase of equipment and other supplies and services. In FY 2021-22, YSU spent \$1.7 million on payroll to support research activities. This, along with \$2 million in other research spending,² created a net total of \$3 million in added income for the regional economy. This added income is equivalent to supporting 59 jobs.

Start-up company impact



YSU creates an exceptional environment that fosters innovation and entrepreneurship, evidenced by the number of YSU start-up companies created in the region. Start-up companies, created specifically to license and commercialize YSU technology or knowledge, have a strong and clearly defined link to YSU. In FY 2021-22, YSU start-up companies added \$9 million in income to the YSU Service Region economy, which is equivalent to supporting 64 jobs.

YSU's Entrepreneurship Center

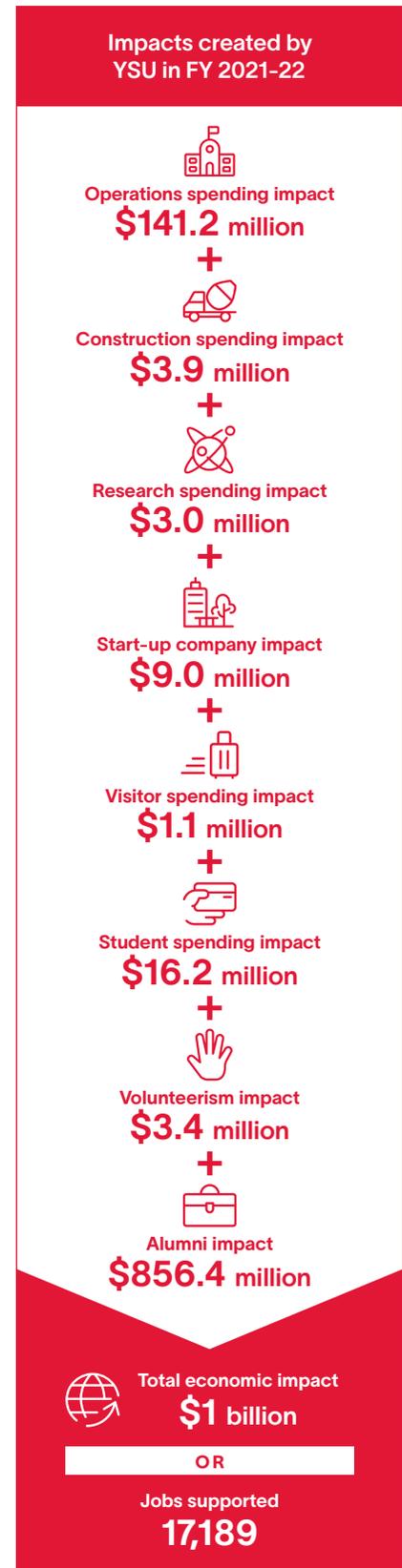
The primary goal of the Entrepreneurship Center at YSU is the development of entrepreneurship initiatives and programs. Through the Entrepreneurship Center, students participate in competitions, receive support to pursue their entrepreneurial dream, network with entrepreneurs, and participate in the professional student organization, Enactus. YSU students of all majors may pursue both the Entrepreneurship Certificate and Minor and learn how to transform their idea, product, or service into a new business. The Center also encourages entrepreneurship throughout the community by hosting entrepreneurship programs for students in grades 6–12 and adults interested in entrepreneurship.

Visitor spending impact



Tens of thousands of visitors from outside the region were attracted to YSU during the analysis year to attend commencement, sports events, and other activities sponsored by the university. It is important to remind the reader of the restrictions imposed by the COVID-19 pandemic and its strong influence on the number of visitors during FY 2021-22. While in the region, visitors spent money for food, transportation, and other personal expenses. The off-campus expenditures of the university's out-of-region visitors generated a net impact of \$1.1 million in added income for the regional economy in FY 2021-22. This \$1.1 million in added income is equivalent to supporting 29 jobs.

² Excludes indirect costs because indirect costs are not necessarily spent during the analysis year.



Student spending impact



Around 25% of students attending YSU originated from outside the region in FY 2021-22, and over half of these students relocated to the YSU Service Region to attend YSU. These students may not have come to the region if the university did not exist. In addition, some in-region students, referred to as retained students, would have left the YSU Service Region if not for the existence of YSU. While attending the university, these relocated and retained students spent money on groceries, accommodation, transportation, and other household expenses. This spending generated \$16.2 million in added income for the regional economy in FY 2021-22, which supported 312 jobs in the YSU Service Region.

Volunteerism impact



YSU encourages its students and employees to volunteer in the YSU Service Region, where they can work with businesses and organizations to help meet their goals. The work of these student and employee volunteers allows businesses and organizations to grow, increasing their output and impacting the economy at large. The work of YSU student and employee volunteers is equivalent to \$1.9 million in earnings.³ In terms of actual impact to the YSU Service Region economy, YSU student and employee volunteers generated an impact of \$3.4 million in added income for the region in FY 2021-22, equivalent to supporting 147 jobs.

YSU's workforce, education, research and commercial center

YSU is at the center of a plan to cast the Mahoning Valley as a national hub of electric vehicle (EV) workforce development excellence. YSU's Division of Workforce Education and Innovation (DWEI), in partnering with Foxconn to establish an electric-vehicle workforce training and innovation center, is helping to create opportunities for individuals regionally as well as statewide. The center will focus on helping the emerging electric vehicle industry build and scale a sustainable workforce around advanced manufacturing, energy storage, and other integrated technology solutions, such as artificial intelligence, 5G, and cybersecurity. DWEI has also implemented broadband and 5G readiness training across eastern Ohio, allowing 165 people in Mahoning, Trumbull, Columbiana, Ashtabula, Jefferson, and Belmont Counties to earn 375 credentials for careers in broadband and 5G. The deployment of 5G is expected to create approximately 32,000 jobs in network infrastructure over the next several years, and YSU has developed a comprehensive and inclusive plan to increase the broadband/5G workforce through increased industry awareness and outreach, as well as through industry recognized credentials, training, education, and career pathways.

Alumni impact



The education and training YSU provides for regional residents has the greatest impact. Since the establishment of the university, students have studied

³ By state value per volunteer hour was provided by Independent Sector (see https://independentsector.org/resource/vovt_details/).



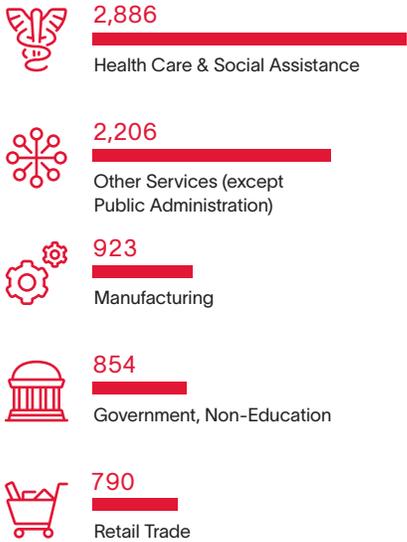
at YSU and entered the regional workforce with greater knowledge and new skills. Today, thousands of former YSU students are employed in the YSU Service Region. As a result of their education from YSU, the students receive higher earnings and increase the productivity of the businesses that employ them. In FY 2021-22, YSU alumni generated \$856.4 million in added income for the regional economy, which is equivalent to supporting 13,206 jobs.

Total impact

YSU added \$1 billion in income to the YSU Service Region economy during the analysis year, equal to the sum of the operations, construction, and research spending impacts; the start-up company impact; the visitor and student spending impacts; the volunteerism impact; and the alumni impact. For context, the \$1 billion impact was equal to approximately 3.3% of the total gross regional product (GRP) of the YSU Service Region. This contribution that the university provided on its own is as large as the entire Real Estate & Rental & Leasing industry in the region.

YSU's total impact can also be expressed in terms of jobs supported. The \$1 billion impact supported 17,189 regional jobs, using the jobs-to-sales ratios specific to each industry in the region. This means that one out of every 21 jobs in the YSU Service Region is supported by the activities of YSU and its students. In addition, the \$1 billion, or 17,189 supported jobs, stemmed from different industry sectors. For instance, among non-education industry sectors, the activities of YSU and its alumni in the Health Care & Social Assistance industry sector supported 2,886 jobs in FY 2021-22. If the university did not exist, these impacts would not have been generated in the YSU Service Region.

YSU impacts by industry (jobs supported)



One out of every 21 jobs in the YSU Service Region is supported by the activities of YSU and its students.

Investment analysis



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 evaluates YSU as an investment from the perspectives of students, taxpayers, and society in Ohio.

Student perspective



In FY 2021-22, YSU served an unduplicated 13,138 students across the three semesters during the year of analysis. In order to attend the university, 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 YSU's students in FY 2021-22 amounted to a present value of \$172.7 million, equal to \$88.8 million in out-of-pocket expenses (including future principal and interest on student loans) and \$83.9 million in forgone time and money.

In return for their investment, YSU's students will receive a stream of higher future earnings that will continue to grow throughout their working lives. For example, the average YSU bachelor's degree graduate from FY 2021-22 will see annual earnings that are \$29,100 higher than a person with a high school diploma or equivalent working in Ohio. Over a working lifetime, the benefits of the bachelor's degree over a high school diploma will amount to an undiscounted value of \$1.3 million in higher earnings per graduate. The present value of the cumulative higher future earnings that YSU's FY 2021-22 students will receive over their working careers is \$1.2 billion.

The students' benefit-cost ratio is 6.7. In other words, for every dollar students invest in YSU in the form of out-of-pocket expenses and forgone time and money, they will receive a cumulative value of \$6.70 in higher future earnings. Annually, the students'

Students see a high rate of return for their investment in YSU



Average annual return for YSU students

18.0%



Stock market 30-year average annual return

10.5%

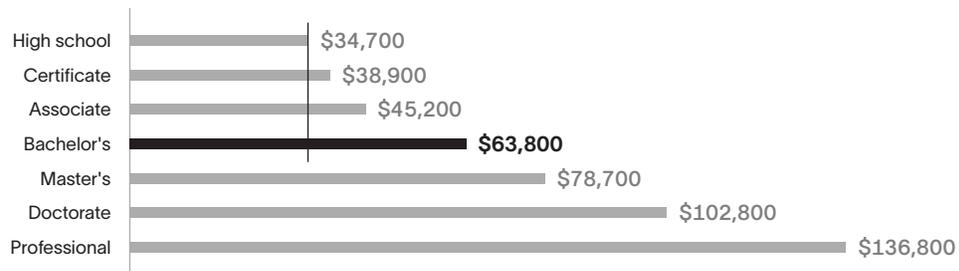


Interest earned on savings account (National Rate Cap)

0.8%

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

The average bachelor's degree graduate from YSU will see an increase in earnings of **\$29,100** each year compared to a person with a high school diploma or equivalent working in Ohio.



Source: Lightcast employment data.



investment in YSU has an average annual internal rate of return of 18.0%, which is impressive compared to the U.S. stock market's 30-year average rate of return of 10.5%.

Taxpayer perspective



YSU generates more in tax revenue than it receives. 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 YSU students will 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 \$134.7 million in added taxes.

Benefits to taxpayers will also consist of savings generated by the improved lifestyles of YSU students and the corresponding reduced government services. Education is statistically correlated with a variety of lifestyle changes. The education that YSU 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. YSU students will be more employable, so their reduced demand for income assistance such as welfare and unemployment benefits will benefit taxpayers. For a list of study references, contact the university for a copy of the main report. Altogether, the present value of the benefits associated with an education from YSU will generate \$29.8 million in savings to state and local taxpayers.

Total taxpayer benefits amount to \$164.4 million, the present value sum of the added taxes and public sector savings. Taxpayer costs are \$53.6 million, equal to the amount of state and local government funding YSU received in FY 2021-22. These benefits and costs yield a benefit-cost ratio of 3.1. This means that for every dollar of public money invested in YSU in FY 2021-22, taxpayers will receive a cumulative present value of \$3.10 over the course of the students' working lives. The average annual internal rate of return for taxpayers is 6.1%, which compares favorably to other long-term investments in the public sector.

For every dollar of public money invested in YSU, taxpayers will receive a cumulative value of **\$3.10** over the course of the students' working lives.

Social perspective



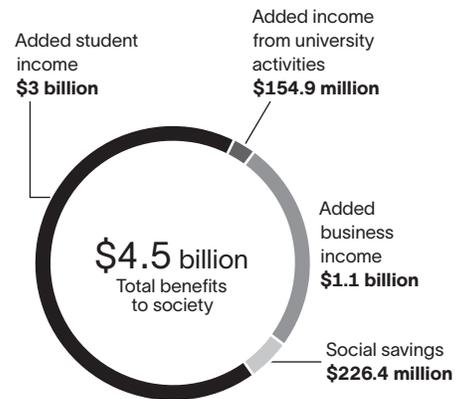
Society as a whole in Ohio benefits from the presence of YSU in two major ways. Primarily, society benefits from an increased economic base in the state. This is attributed to the added income from students' increased lifetime earnings (added student income) and increased business output (added business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

Benefits to society also consist of the savings generated by the improved lifestyles of YSU 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 university for a copy of the main report.

Altogether, the social benefits of YSU equal a present value of \$4.5 billion. These benefits include \$3.0 billion in added student income, \$1.1 billion in added business income, \$154.9 million in added income from university activities, as well as \$226.4 million in social savings related to health, the justice system, and income assistance in Ohio. People in Ohio invested a present value total of \$299.9 million in YSU in FY 2021-22. The cost includes all the university and student costs.

The benefit-cost ratio for society is 14.9, equal to the \$4.5 billion in benefits divided by the \$299.9 million in costs. In other words, for every dollar invested in YSU, people in Ohio will receive a cumulative value of \$14.90 in benefits. The benefits of this investment will occur for as long as YSU's FY 2021-22 students remain employed in the state workforce.

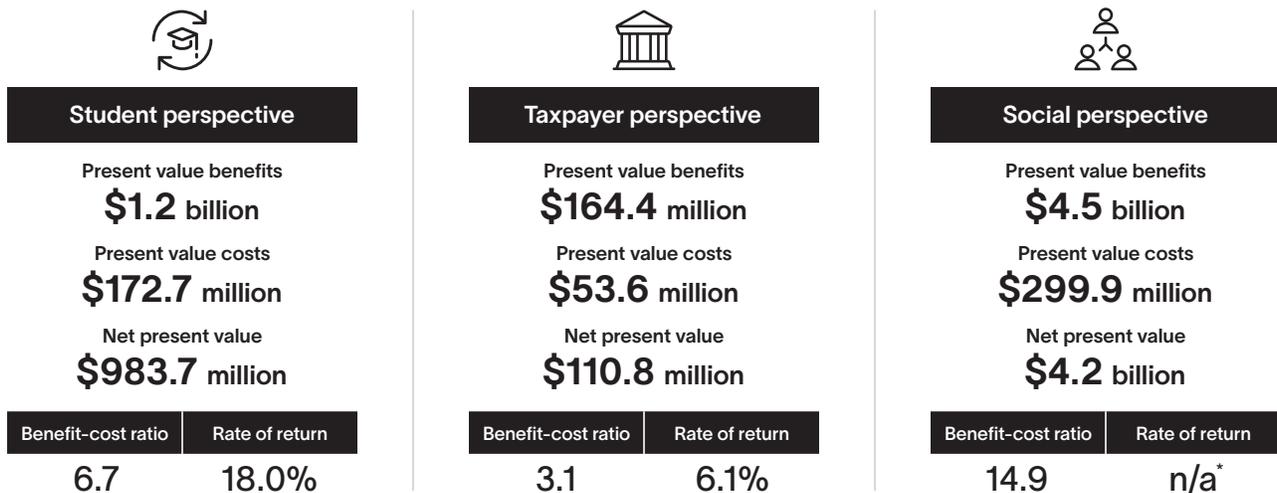
Social benefits in Ohio from YSU



Source: Lightcast impact model.

Summary of investment analysis results

The results of the analysis demonstrate that YSU is 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 YSU. At the same time, taxpayers' investment in YSU returns more to government budgets than it costs and creates a wide range of social benefits throughout Ohio.



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

Conclusion

The results of this study demonstrate that YSU creates value from multiple perspectives. The university benefits regional businesses by increasing consumer spending in the region and supplying a steady flow of qualified, trained workers to the workforce. YSU enriches the lives of students by raising their lifetime earnings and helping them achieve their individual potential. The university benefits state and local taxpayers through increased tax receipts and a reduced demand for government-supported social services. Finally, YSU benefits society as a whole in Ohio 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 YSU, 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 university for a copy of the main report.

Additionally, in general Lightcast discourages comparisons between individual institutions and between educational systems since many factors, such as regional economic and political conditions, institutional differences, and student demographics are outside of the institution's control. In addition, every institution is unique, meaning the results and types of impact or investment measures are tailored to the specific institution or educational system year to year.

The results of this study demonstrate that YSU creates 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.