



The Economic Value of the Ozarks Technical Community College



O ZARKS TECHNICAL COMMUNITY COLLEGE (OTC) creates value in many ways. The college plays a key role in helping students increase their employability and achieve their individual potential. The college draws students to the region, generating new dollars and opportunities for Southwest Missouri.¹ OTC provides students with the education, training, and skills they need to have fulfilling and prosperous careers. Furthermore, OTC is a place for students to meet new people, increase their self-confidence, and promote their overall health and well-being.

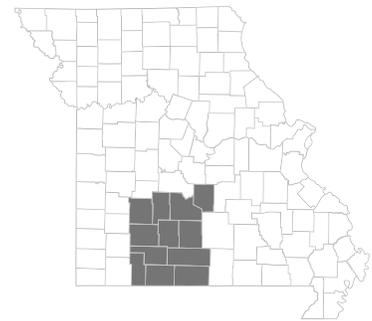
OTC influences both the lives of its students and the regional economy. The college supports a variety of industries in Southwest Missouri, serves regional businesses, and benefits society as a whole in Missouri from an expanded economy and improved quality of life. Additionally, the benefits created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

This study measures the economic impacts created by OTC on the business community and the benefits the college 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 college, for fiscal year (FY) 2021-22. Impacts on the Southwest Missouri 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 Missouri are reported under the investment analysis.



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

¹ For the purposes of this analysis, Southwest Missouri is comprised of Christian, Dallas, Douglas, Greene, Laclede, Ozark, Polk, Pulaski, Stone, Taney, Webster, and Wright Counties.

Economic impact analysis



OTC promotes economic growth in Southwest Missouri through its direct expenditures and the resulting expenditures of students and regional businesses. The college serves as an employer and buyer of goods and services for its day-to-day and construction operations. The college's activities attract students from outside Southwest Missouri, whose expenditures benefit regional vendors. In addition, OTC is a primary source of higher education to Southwest Missouri residents and a supplier of trained workers to regional industries, enhancing overall productivity in the regional workforce.

Operations spending impact



OTC adds economic value to Southwest Missouri as an employer of regional residents and a large-scale buyer of goods and services. In FY 2021-22, the college employed 1,561 full-time and part-time faculty and staff, 91% of whom lived in Southwest Missouri. Total payroll at OTC was \$52 million, much of which was spent in the region for groceries, mortgage and rent payments, dining out, and other household expenses. In addition, the college spent \$49.8 million on day-to-day expenses related to facilities, supplies, and professional services (excluding construction).

OTC's day-to-day operations spending added \$66.6 million in income to the region during the analysis year. This figure represents the college's payroll, the multiplier effects generated by the in-region spending of the college and its employees, and a downward adjustment to account for funding that the college received from regional sources. The \$66.6 million in added income is equivalent to supporting 1,694 jobs in the region.

Construction spending impact



OTC 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, OTC's construction spending generated \$10.4 million in added income, which is equivalent to supporting 187 jobs.

Student spending impact



Around 21% of credit students attending OTC originated from outside the region in FY 2021-22, and some of these students relocated to Southwest Missouri to attend OTC. These students may not have come to the region if the college did not exist. In addition, some in-region students, referred to as retained students,

Impacts created by OTC in FY 2021-22



Operations spending impact

\$66.6 million

+



Construction spending impact

\$10.4 million

+



Student spending impact

\$16.5 million

+



Alumni impact

\$171.9 million



Total economic impact

\$265.3 million

OR

Jobs supported

4,960



would have left Southwest Missouri if not for the existence of OTC. While attending the college, these relocated and retained students spent money on groceries, accommodation, transportation, and other household expenses. This spending generated \$16.5 million in added income for the regional economy in FY 2021-22, which supported 306 jobs in Southwest Missouri.

Alumni impact



The education and training OTC provides for regional residents has the greatest impact. Since the establishment of the college, students have studied at OTC and entered the regional workforce with greater knowledge and new skills. Today, thousands of former OTC students are employed in Southwest Missouri. As a result of their education from OTC, the students receive higher earnings and increase the productivity of the businesses that employ them. In FY 2021-22, OTC alumni generated \$171.9 million in added income for the regional economy, which is equivalent to supporting 2,773 jobs.

Total impact

OTC added \$265.3 million in income to the Southwest Missouri economy during the analysis year, equal to the sum of the operations and construction spending impacts; the student spending impact; and the alumni impact. For context, the \$265.3 million impact was equal to approximately 0.8% of the total gross regional product (GRP) of Southwest Missouri. This contribution that the college provided on its own is nearly as large as the entire Utilities industry in the region.

OTC's total impact can also be expressed in terms of jobs supported. The \$265.3 million impact supported 4,960 regional jobs, using the jobs-to-sales ratios specific to each industry in the region. This means that one out of every 83 jobs in Southwest Missouri is supported by the activities of OTC and its students. In addition, the \$265.3 million, or 4,960 supported jobs, stemmed from different industry sectors. For instance, among non-education industry sectors, the spending of OTC and its students and the activities of its alumni in the Health Care & Social Assistance industry sector supported 813 jobs in FY 2021-22. If the college did not exist, these impacts would not have been generated in Southwest Missouri.

OTC impacts by industry (jobs supported)



813

Health Care & Social Assistance



414

Retail Trade



339

Construction



302

Other services (Except Public Admin)



286

Accommodation & Food Services

One out of every 83 jobs in Southwest Missouri is supported by the activities of OTC 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 OTC as an investment from the perspectives of students, taxpayers, and society in Missouri.

Student perspective



In FY 2021-22, OTC served 14,949 credit and 1,512 non-credit students. In order to attend the college, 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 OTC's students in FY 2021-22 amounted to a present value of \$48.2 million, equal to \$31.8 million in out-of-pocket expenses (including future principal and interest on student loans) and \$16.4 million in forgone time and money.

In return for their investment, OTC's students will receive a stream of higher future earnings that will continue to grow throughout their working lives. For example, the average OTC associate degree graduate from FY 2021-22 will see annual earnings that are \$7,100 higher than a person with a high school diploma or equivalent working in Missouri. Over a working lifetime, the benefits of the associate degree over a high school diploma will amount to an undiscounted value of \$333.7 thousand in higher earnings per graduate. The present value of the cumulative higher future earnings that OTC's FY 2021-22 students will receive over their working careers is \$245.2 million.

The students' benefit-cost ratio is 5.1. In other words, for every dollar students invest in OTC in the form of out-of-pocket expenses and forgone time and money, they will receive a cumulative value of \$5.10 in higher future earnings. Annually, the students' investment in OTC has an average annual internal rate of return of 17.3%, which is impressive compared to the U.S. stock market's 30-year average rate of return of 9.6%.

Students see a high rate of return for their investment in the OTC



Average annual return for OTC students
17.3%



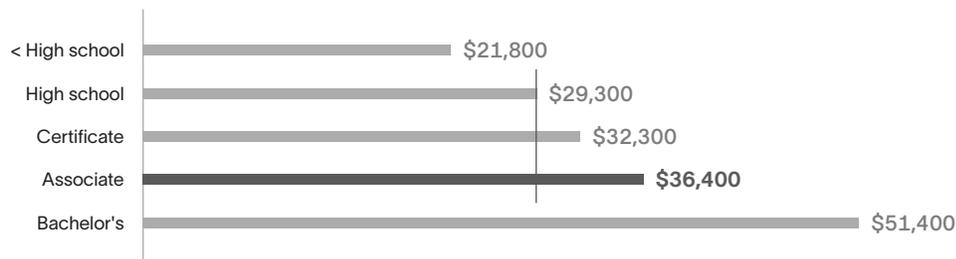
Stock market 30-year average annual return
9.6%



Interest earned on savings account (National Rate Cap)
0.4%

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

The average associate degree graduate from OTC will see an increase in earnings of **\$7,100** each year compared to a person with a high school diploma or equivalent working in Missouri.



Source: Lightcast employment data.

Taxpayer perspective



OTC 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 OTC 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 \$73.1 million in added taxes.

Benefits to taxpayers will also consist of savings generated by the improved lifestyles of OTC students and the corresponding reduced government services. Education is statistically correlated with a variety of lifestyle changes. The education that OTC 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. OTC 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 college for a copy of the main report. Altogether, the present value of the benefits associated with an education from OTC will generate \$6.9 million in savings to state and local taxpayers.

Total taxpayer benefits amount to \$80 million, the present value sum of the added taxes and public sector savings. Taxpayer costs are \$44.8 million, equal to the amount of state and local government funding OTC received in FY 2021-22. These benefits and costs yield a benefit-cost ratio of 1.8. This means that for every dollar of public money invested in OTC in FY 2021-22, taxpayers will receive a cumulative present value of \$1.80 over the course of the students' working lives. The average annual internal rate of return for taxpayers is 3.1%, which compares favorably to other long-term investments in the public sector.

For every dollar of public money invested in OTC, taxpayers will receive a cumulative value of **\$1.80** over the course of the students' working lives.

Social perspective



Society as a whole in Missouri benefits from the presence of OTC 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 Missouri.

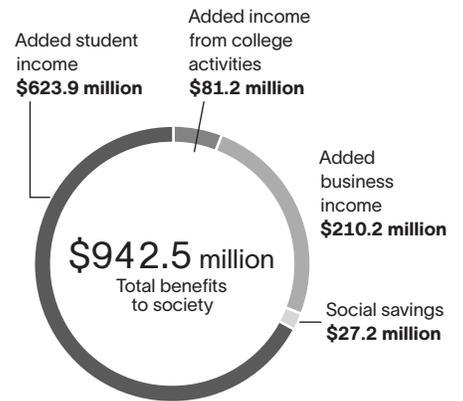
Benefits to society also consist of the savings generated by the improved lifestyles of OTC students. As discussed in the previous section, education is statistically correlated with a variety of lifestyle changes that generate social savings. Note that these costs are avoided by the consumers but are 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 college for a copy of the main report.

Altogether, the social benefits of OTC equal a present value of \$942.5 million. These benefits include \$623.9 million in added student income, \$210.2 million in added business income, \$81.2 million in added income from college activities, as well as \$27.2 million in social savings related to health, the justice system, and income assistance in Missouri. People in Missouri invested a present value total of \$150.4 million in OTC in FY 2021-22. The cost includes all the college and student costs.

The benefit-cost ratio for society is 6.3, equal to the \$942.5 million in benefits divided by the \$150.4 million in costs. In other words, for every dollar invested in OTC, people in Missouri will receive a cumulative value of \$6.30 in benefits. The benefits of this investment will occur for as long as OTC's FY 2021-22 students remain employed in the state workforce.

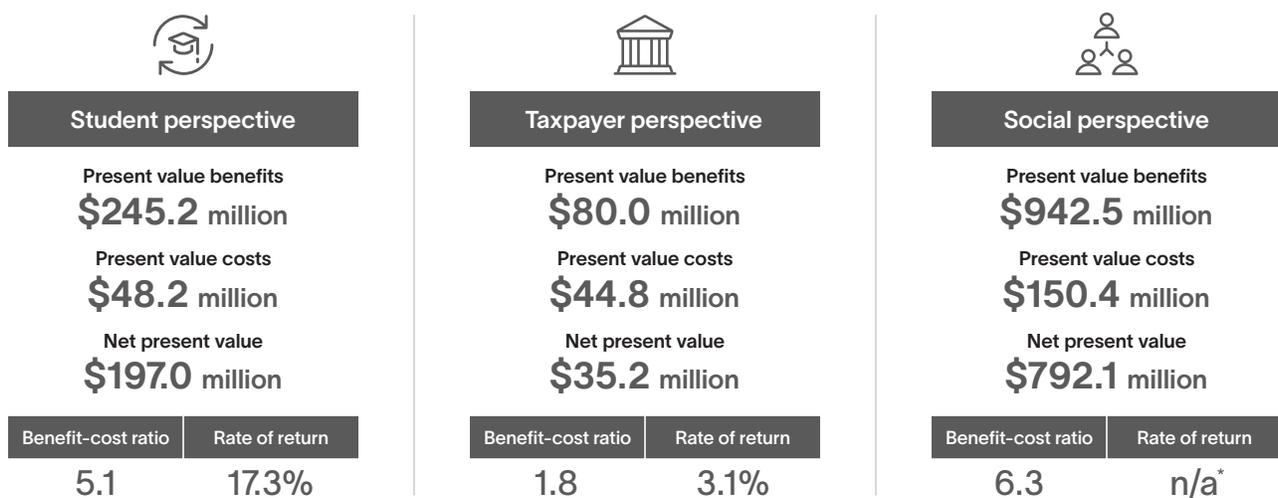
Social benefits in Missouri from OTC



Source: Lightcast impact model.

Summary of investment analysis results

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



* 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.

Conclusion

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

The results of this study demonstrate that OTC 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.