



The Economic Value of Central Ohio Technical College on the COTC Enrollment Area



CENTRAL OHIO TECHNICAL COLLEGE (COTC) 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 the COTC enrollment area.¹ COTC provides students with the education, training, and skills they need to have fulfilling and prosperous careers. Furthermore, COTC is a place for students to meet new people, increase their self-confidence, and promote their overall health and well-being.

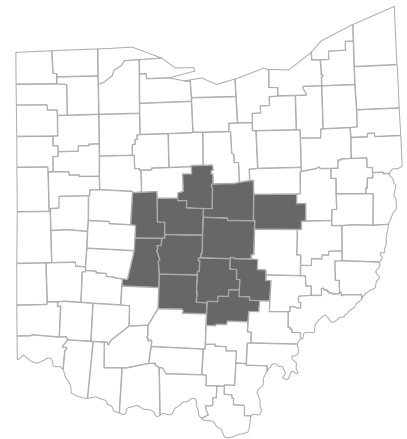
COTC influences both the lives of its students and the regional economy. The college supports a variety of industries in the COTC enrollment area, serves regional businesses, and benefits society as a whole in Ohio from an expanded economy and improved quality of life. Additionally, the benefits created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

This study measures the economic impacts created by COTC 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) 2020–21. Impacts on the COTC enrollment area 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.



THE COTC ENROLLMENT AREA, OHIO

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


¹ For the purposes of this analysis, the COTC enrollment area includes the COTC Service Region and is comprised of the following counties: Coshocton, Delaware, Fairfield, Franklin, Hocking, Knox, Licking, Madison, Morrow, Perry, Pickaway, and Union.

Economic impact analysis




COTC promotes economic growth in the COTC enrollment area 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 operations. The college's activities attract students from outside the COTC enrollment area, whose expenditures benefit regional vendors. In addition, COTC is a primary source of higher education to the COTC enrollment area residents and a supplier of trained workers to regional industries, enhancing overall productivity in the regional workforce.

Operations spending impact

 COTC adds economic value to the COTC enrollment area as an employer of regional residents and a large-scale buyer of goods and services. In FY 2020-21, the college employed 405 full-time and part-time faculty and staff, 78% of whom lived in the COTC enrollment area. Total payroll at COTC was \$10.9 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 \$12.4 million on day-to-day expenses related to facilities, supplies, and professional services.

COTC's day-to-day operations spending added \$13.2 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 \$13.2 million in added income is equivalent to supporting 403 jobs in the region.

Student spending impact

 Around 5% of students attending COTC originated from outside the region in FY 2020-21, and some of these students relocated to the COTC enrollment area to attend COTC. 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, would have left the COTC enrollment area if not for the existence of COTC. While attending the college, these relocated and retained students spent money on groceries, accommodation, transportation, and other household expenses. This spending generated \$2.9 million in added income for the regional economy in FY 2020-21, which supported 49 jobs in the COTC enrollment area.

Impacts created by COTC in FY 2020-21



Operations spending impact

\$13.2 million

+



Student spending impact

\$2.9 million

+



Alumni impact

\$84.9 million



Total economic impact

\$101 million

OR

Jobs supported

1,489



Alumni impact



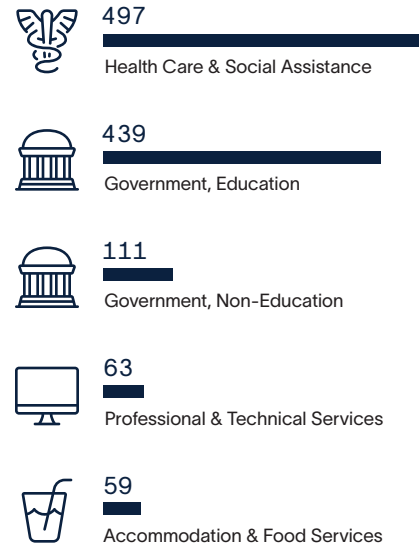
The education and training COTC provides for regional residents has the greatest impact. Since the establishment of the college, students have studied at COTC and entered the regional workforce with greater knowledge and new skills. Today, thousands of former COTC students are employed in the COTC enrollment area. As a result of their education from COTC, the students receive higher earnings and increase the productivity of the businesses that employ them. In FY 2020-21, COTC alumni generated \$84.9 million in added income for the regional economy, which is equivalent to supporting 1,036 jobs.

Total impact

COTC added \$101 million in income to the COTC enrollment area economy during the analysis year, equal to the sum of the operations spending impact, the student spending impact, and the alumni impact.

COTC's total impact can also be expressed in terms of jobs supported. The \$101 million impact supported 1,489 regional jobs, using the jobs-to-sales ratios specific to each industry in the region. In addition, the \$101 million, or 1,489 supported jobs, stemmed from different industry sectors. For instance, COTC's spending and alumni in the Health Care & Social Assistance industry sector supported 497 jobs in FY 2020-21. If the college did not exist, these impacts would not have been generated in the COTC enrollment area.

COTC impacts by industry (jobs supported)




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 considers COTC as an investment from the perspectives of students, taxpayers, and society in Ohio.

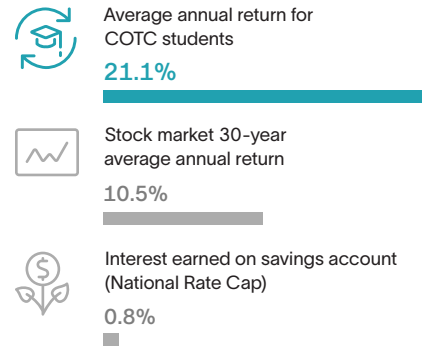
Student perspective

 In FY 2020-21, COTC served 5,060 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 COTC's students in FY 2020-21 amounted to a present value of \$13.6 million, equal to \$9.9 million in out-of-pocket expenses (including future principal and interest on student loans) and \$3.7 million in forgone time and money.

In return for their investment, COTC's students will receive a stream of higher future earnings that will continue to grow throughout their working lives. For example, the average COTC associate degree graduate from FY 2020-21 will see annual earnings that are \$9,000 higher than a person with a high school diploma or equivalent working in Ohio. Over a working lifetime, the benefits of the associate degree over a high school diploma will amount to an undiscounted value of \$387 thousand in higher earnings per graduate. The present value of the cumulative higher future earnings that COTC's FY 2020-21 students will receive over their working careers is \$98.5 million.

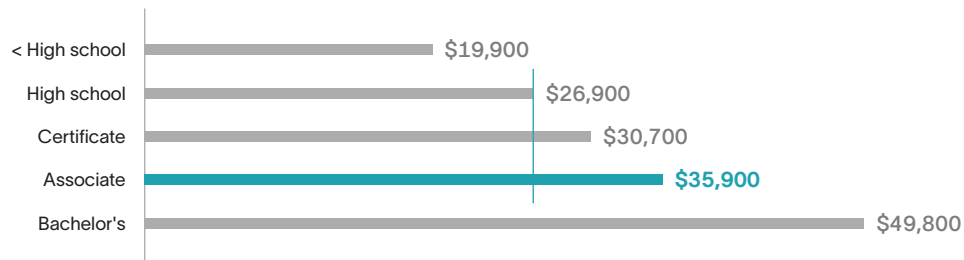
The students' benefit-cost ratio is 7.2. In other words, for every dollar students invest in COTC in the form of out-of-pocket expenses and forgone time and money, they will receive a cumulative value of \$7.20 in higher future earnings. Annually, the students' investment in COTC has an average annual internal rate of return of 21.1%, which is impressive compared to the U.S. stock market's 30-year average rate of return of 10.5%.

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



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

The average associate degree graduate from COTC will see an increase in earnings of **\$9,000** each year compared to a person with a high school diploma or equivalent working in Ohio.



Source: Lightcast employment data.

Taxpayer perspective



COTC generates more in tax revenue than it takes. 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 COTC 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 2020-21 students' working lives, the state and local government will have collected a present value of \$26.6 million in added taxes.

Benefits to taxpayers will also consist of savings generated by the improved lifestyles of COTC students and the corresponding reduced government services. Education is statistically correlated with a variety of lifestyle changes. The educations that COTC 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. COTC 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 COTC will generate \$2.6 million in savings to state and local taxpayers.

Total taxpayer benefits amount to \$29.2 million, the present value sum of the added taxes and public sector savings. Taxpayer costs are \$11.7 million, equal to the amount of state and local government funding COTC received in FY 2020-21. These benefits and costs yield a benefit-cost ratio of 2.5. This means that for every dollar of public money invested in COTC in FY 2020-21, taxpayers will receive a cumulative present value of \$2.50 over the course of the students' working lives. The average annual internal rate of return for taxpayers is 4.5%, which compares favorably to other long-term investments in the public and private sectors.

For every dollar of public money invested in COTC, taxpayers will receive a cumulative value of **\$2.50** over the course of the students' working lives.

Social perspective



Society as a whole in Ohio benefits from the presence of COTC 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 COTC 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

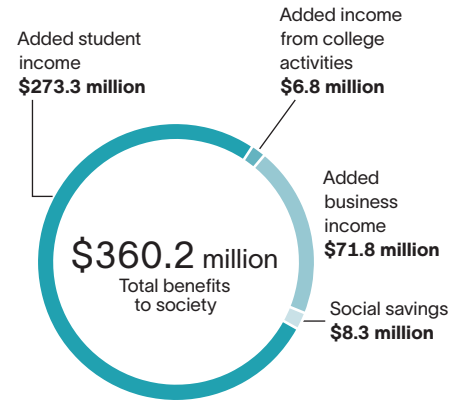


by the taxpayers outlined above. Healthcare savings include avoided medical costs associated with smoking, alcohol dependence, obesity, drug abuse, and depression. Justice system savings include avoided costs to the government and society due to less judicial activity. Income assistance savings include 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 COTC equal a present value of \$360.2 million. These benefits include \$273.3 million in added student income, \$71.8 million in added business income, \$6.8 million in added income from college activities, as well as \$8.3 million in social savings related to health, crime, and income assistance in Ohio. People in Ohio invested a present value total of \$29.4 million in COTC in FY 2020–21. The cost includes all the college and student costs.

The benefit–cost ratio for society is 12.2, equal to the \$360.2 million in benefits divided by the \$29.4 million in costs. In other words, for every dollar invested in COTC, people in Ohio will receive a cumulative value of \$12.20 in benefits. The benefits of this investment will occur for as long as COTC’s FY 2020–21 students remain employed in the state workforce.

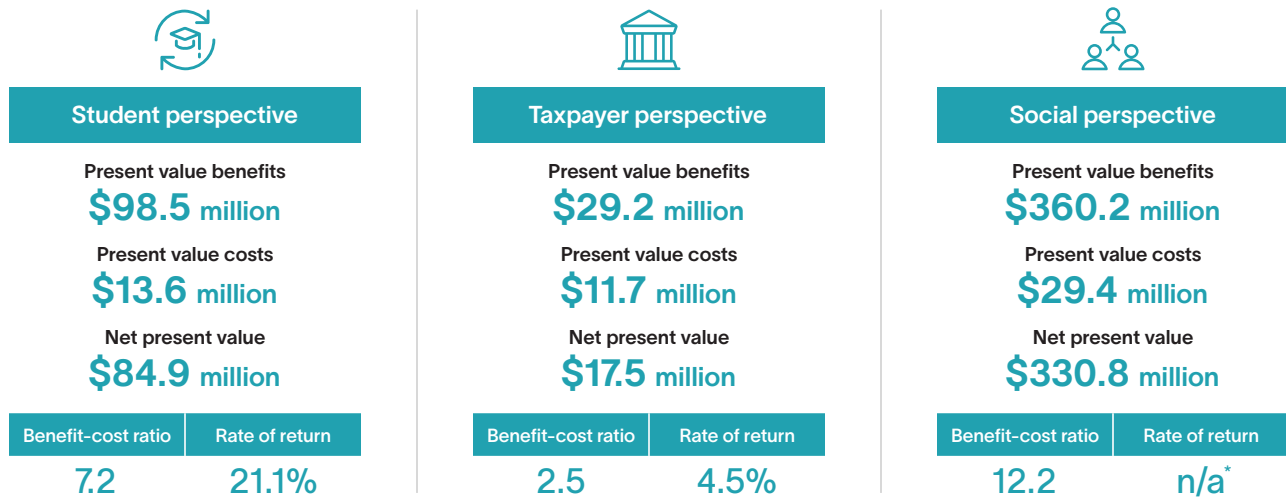
Social benefits in Ohio from COTC



Source: Lightcast impact model.

Summary of investment analysis results

The results of the analysis demonstrate that COTC 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 COTC. At the same time, taxpayers’ investment in COTC 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 of the investment are not necessarily the same as the original investors.

Conclusion



The results of this study demonstrate that COTC 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. COTC 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, COTC 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 2020-21 academic and financial reports from COTC, 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 COTC 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.