

The Economic Value of Moreno Valley College's Career and Technical Education





MORENO VALLEY COLLEGE'S Career and Technical Education (MVC's CTE) creates value in many ways. The college plays a key role in helping CTE students increase their employability and achieve their individual potential. The college draws CTE students to the region, generating new dollars and opportunities for the MVC Service Area.¹ MVC's CTE provides students with the education, training, and skills they need to have fulfilling and prosperous careers. Furthermore, MVC's CTE is a place for students to meet new people, increase their self-confidence, and promote their overall health and well-being.

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

This study measures the economic impacts created by MVC's CTE on the business community and the benefits the college's CTE 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, specific to CTE and provided by the Riverside Community College District, for fiscal year (FY) 2023-24.² Impacts on the MVC Service Area economy are reported under the economic impact analysis and are measured in terms of added income. The returns on investment to CTE students, taxpayers, and society in California are reported under the investment analysis.



The MVC Service Area
(in Riverside County, CA)

MVC's CTE influences both the **lives of its CTE students** and the **regional economy**.

¹ For the purposes of this analysis, the MVC Service Area is comprised of the following 12 zip codes in Riverside County: 92508, 92518, 92551, 92552, 92553, 92554, 92555, 92556, 92557, 92570, 92571, and 92599.

² Due to data limitations, the number of CTE faculty and staff and CTE revenues and expenditures were estimated by Lightcast using a proportion based on CTE credits.

Economic impact analysis



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

Operations spending impact

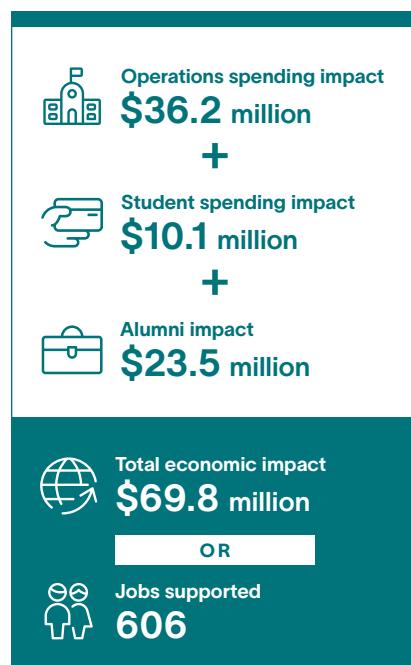
 MVC's CTE adds economic value to the MVC Service Area as an employer of regional residents and a large-scale buyer of goods and services. In FY 2023-24, the college employed 104 full-time and part-time CTE faculty and staff, 15% of whom lived in the MVC Service Area. Total payroll specific to MVC's CTE was \$34.5 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 \$18.3 million on expenses related to CTE facilities, supplies, and professional services.

MVC's CTE operations spending added \$36.2 million in income to the region during the analysis year. This figure represents the college's CTE payroll, the multiplier effects generated by the in-region CTE spending of the college and its employees, and a downward adjustment to account for funding received from regional sources. The \$36.2 million in added income is equivalent to supporting 121 jobs in the region.

Student spending impact

 Around 54% of CTE students attending MVC originated from outside the region in FY 2023-24, and some of these CTE students relocated to the MVC Service Area to attend MVC. These CTE students may not have come to the region if the college did not exist. In addition, some in-region CTE students, referred to as retained CTE students, would have left the MVC Service Area if not for the existence of MVC. While attending the college, these relocated and retained CTE students spent money on groceries, accommodation, transportation, and other household expenses. This spending generated \$10.1 million in added income for the regional economy in FY 2023-24, which supported 164 jobs in the MVC Service Area.

Impacts created by
MVC's CTE in FY 2023-24



Alumni impact

 The education and training MVC's CTE provides for regional residents has the most notable impact. Since the establishment of the college, CTE students have studied at MVC and entered the regional workforce with greater knowledge and new skills. Today, thousands of former MVC CTE students are employed in the MVC Service Area. As a result of their education from MVC, the CTE students receive higher earnings and increase the productivity of the businesses that employ them. In FY 2023-24, MVC's CTE alumni generated \$23.5 million in added income for the regional economy, which is equivalent to supporting 321 jobs.

Total impact

MVC's CTE added \$69.8 million in income to the MVC Service Area economy during the analysis year, equal to the sum of the operations spending impact, the student spending impact, and the alumni impact. For context, the \$69.8 million impact was equal to approximately 0.6% of the total gross regional product (GRP) of the MVC Service Area. This contribution that the college provided on its own is twice as large as the entire Utilities industry in the region.

MVC's CTE total impact can also be expressed in terms of jobs supported. The \$69.8 million impact supported 606 regional jobs, using the jobs-to-sales ratios specific to each industry in the region. In addition, the \$69.8 million, or 606 supported jobs, stemmed from different industry sectors. For instance, among non-education industry sectors, the spending of MVC's CTE and its CTE students and the activities of its alumni in the Government, Non-Education industry sector supported 57 jobs in FY 2023-24. If the college did not exist, these impacts would not have been generated in the MVC Service Area.

MVC's CTE impacts by industry (jobs supported)



The **\$69.8 million** total impact supported **606 regional jobs**.

Investment analysis



An investment analysis evaluates the costs associated with a proposed venture against its expected benefits. The analysis presented here evaluates MVC's CTE as an investment from the perspectives of students, taxpayers, and society in California. As with the economic impact analysis, this analysis considers only FY 2023-24 activities.

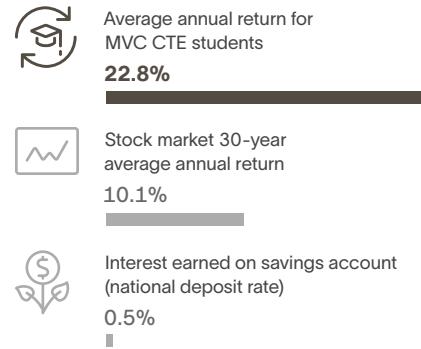
Student perspective

 In FY 2023-24, MVC's CTE served 7,526 credit students. In order to attend the college, the CTE students paid for tuition, fees, books, and supplies. Additionally, CTE students gave up money they would have otherwise earned had they been working instead of attending college. The total investment made by MVC's CTE students in FY 2023-24 amounted to a present value of \$27.0 million, equal to \$6.2 million in out-of-pocket expenses and \$20.8 million in forgone time and money.

In return for their investment, MVC's CTE students will receive a stream of higher future earnings that will continue to grow throughout their working lives. For example, the average associate degree graduate from FY 2023-24 will see annual earnings that are \$10,000 higher than a person with a high school diploma or equivalent working in California. Over a working lifetime, the benefits of an associate degree over a high school diploma will amount to an undiscounted value of \$390,000 higher earnings per graduate. The present value of the cumulative higher future earnings that MVC's FY 2023-24 CTE students will receive over their working careers is \$187.7 million.

The CTE students' benefit-cost ratio is 7.0. In other words, for every dollar CTE students invest in MVC in the form of out-of-pocket expenses and forgone time and money, they will receive a cumulative value of \$7.00 in higher future earnings. Annually, the CTE students' investment in MVC has an average annual internal rate of return of 22.8%, which is impressive compared to the U.S. stock market's 30-year average rate of return of 10.1%.

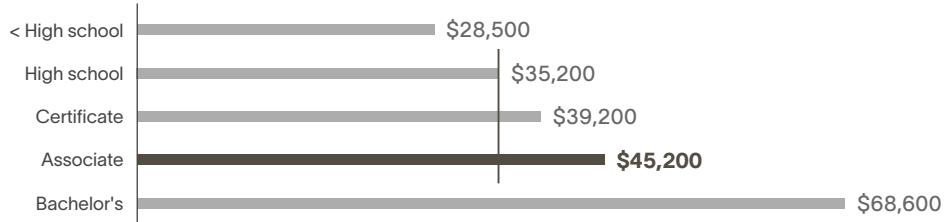
CTE students see a high rate of return for their investment in MVC's CTE



Source: Forbes' S&P 500, 1994-2023; FDIC.gov, March 2023

Average earnings by education level at career midpoint

The average associate degree graduate from MVC's CTE will see an increase in earnings of **\$10,000** each year compared to a person with a high school diploma or equivalent working in California.



Source: Lightcast employment data

Taxpayer perspective



MVC's CTE 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 MVC's CTE students will earn more, they will make higher tax payments throughout their working lives. CTE 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 2023-24 CTE students' working lives, the state and local government will have collected a present value of \$69.1 million in added taxes.

Benefits to taxpayers will also consist of savings generated by the improved lifestyles of MVC's CTE students and the corresponding reduced government services. Education is statistically correlated with a variety of lifestyle changes. The education that MVC's CTE students receive will generate savings in three main categories: 1) health care, 2) justice system, and 3) income assistance. Improved health will lower CTE students' demand for national health care services. In addition, costs related to the justice system will decrease. MVC's CTE students will be more employable, so their reduced demand for income assistance such as welfare and unemployment benefits will benefit taxpayers. Altogether, the present value of the benefits associated with an education from MVC's CTE will generate \$13.1 million in savings to state and local taxpayers.

Total taxpayer benefits amount to \$82.1 million, the present value sum of the added tax revenue and public sector savings. Taxpayer costs are \$41.5 million, equal to the amount of state and local government funding MVC's CTE received in FY 2023-24. These benefits and costs yield a benefit-cost ratio of 2.0. This means that for every dollar of public money invested in MVC's CTE in FY 2023-24, taxpayers will receive a cumulative present value of \$2.00 over the course of the CTE students' working lives. The average annual internal rate of return for taxpayers is 4.6%, which compares favorably to other long-term investments in the public sector.

For every dollar of public money invested in MVC's CTE, taxpayers will receive a cumulative value of **\$2.00** over the course of the CTE students' working lives.

Social perspective



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

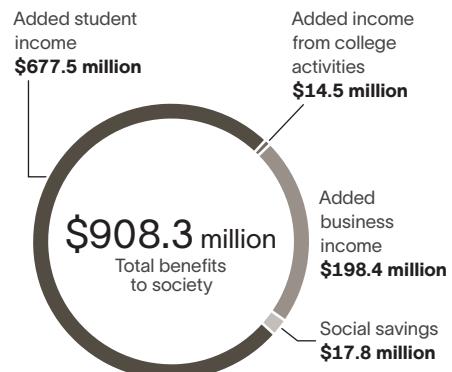
Benefits to society also consist of the savings generated by the improved lifestyles of MVC's CTE students. As discussed in the previous section, education is statistically correlated with a variety of lifestyle changes that generate social savings. Note that these costs are avoided by the consumers but are distinct from the costs avoided by the taxpayers outlined above. Health care savings include avoided medical costs associated with smoking, obesity, substance 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.

Altogether, the social benefits of MVC's CTE equal a present value of \$908.3 million. These benefits include \$677.5 million in added CTE student income, \$198.4 million in added business income, \$14.5 million in added income from college activities, as well as \$17.8 million in social savings related to health, the justice system, and income assistance in California. People in California invested a present value total of \$77.8 million in MVC's CTE in FY 2023-24. The cost includes all the college and CTE student costs.

The benefit-cost ratio for society is 11.7, equal to the \$908.3 million in benefits divided by the \$77.8 million in costs. In other words, for every dollar invested in MVC's CTE, people in California will receive a cumulative value of \$11.70 in benefits. The benefits of this investment will occur for as long as MVC's FY 2023-24 CTE students remain employed in the state workforce.

Social benefits in California from MVC's CTE



Source: Lightcast impact model

Summary of investment analysis results

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

Summary of investment analysis results

 Student perspective	 Taxpayer perspective	 Social perspective
Present value benefits \$187.7 million	Present value benefits \$82.1 million	Present value benefits \$908.3 million
Present value costs \$27.0 million	Present value costs \$41.5 million	Present value costs \$77.8 million
Net present value \$160.7 million	Net present value \$40.7 million	Net present value \$830.5 million
Benefit-cost ratio 7.0	Benefit-cost ratio 2.0	Benefit-cost ratio 11.7
Rate of return 22.8%	Rate of return 4.6%	Rate of return n/a*

* 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 MVC's CTE 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. MVC's CTE enriches the lives of CTE 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, MVC's CTE benefits society as a whole in California by creating a more prosperous economy and generating a variety of savings through the improved lifestyles of CTE students.

About the study

Data and assumptions used in the study are based on several sources, including the FY 2023-24 academic and financial reports specific to MVC's CTE from Riverside Community College District, 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 college-wide main report.



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.