

The Economic Value of Diablo Valley College





DIABLO VALLEY COLLEGE (DVC) 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 Central Contra Costa County.* DVC provides students with the education, training, and skills they need to have fulfilling and prosperous careers. Furthermore, DVC is a place for students to meet new people, increase their self-confidence, and promote their overall health and well-being.

DVC influences both the lives of its students and the regional economy. The college supports a variety of industries in Central Contra Costa County, 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 DVC extend to the state and local government through increased tax revenues and public sector savings.

This study measures the economic impacts created by DVC 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) 2022-23. Impacts on the Central Contra Costa County 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 California are reported under the investment analysis.



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

* For the purposes of this analysis, Central Contra Costa County is comprised of the following zip codes: 94506, 94507, 94516, 94517, 94518, 94519, 94520, 94521, 94522, 94523, 94524, 94526, 94527, 94528, 94529, 94549, 94553, 94556, 94563, 94570, 94575, 94582, 94583, 94595, 94596, 94597, and 94598.

Economic impact analysis



DVC promotes economic growth in Central Contra Costa County 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 Central Contra Costa County, whose expenditures benefit regional vendors. In addition, DVC is one of the primary sources of higher education to Central Contra Costa County residents and a supplier of trained workers to region industries, enhancing overall productivity in the regions workforce.

Operations spending impact



DVC adds economic value to Central Contra Costa County as an employer of regional residents and a large-scale buyer of goods and services. In FY 2022-23, the college employed 1,878 full-time and part-time faculty and staff, 45% of whom lived in Central Contra Costa County. Total payroll at DVC was \$108.9 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 \$47.1 million on expenses related to facilities, supplies, and professional services (excluding construction).

DVC's operations spending added \$117.0 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 \$117.0 million in added income is equivalent to supporting 1,895 jobs in the region.

Construction spending impact



DVC 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 2022-23, DVC's \$21.9 million of construction spending generated \$7.5 million in added income, which is equivalent to supporting 62 jobs.

Impacts created by DVC in FY 2022-23

Contra Costa County		Central Contra Costa County
Operations spending impact		
\$119.0 million		\$117.0 million
+		
Construction spending impact		
\$11.4 million		\$7.5 million
+		
Student spending impact		
\$126.7 million		\$114.5 million
+		
Alumni impact		
\$909.2 million		\$870.6 million
Total economic impact		
\$1.2 billion		\$1.1 billion
OR		
Jobs supported		
12,240		11,680

Student spending impact



Around 48% of students attending DVC originated from outside the region in FY 2022-23, and many of these students relocated to Central Contra Costa County to attend DVC. 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 Central Contra Costa County if not for the existence of DVC. While attending the college, these relocated and retained students spent money on groceries, accommodation, transportation, and other household expenses. This spending generated \$114.5 million in added income for the regional economy in FY 2022-23, which supported 1,514 jobs in Central Contra Costa County.

Alumni impact



The education and training DVC provides for region residents has the greatest impact. Since the establishment of the college, students have studied at DVC and entered the regional workforce with greater knowledge and new skills. Today, thousands of former DVC students are employed in Central Contra Costa County. As a result of their education from DVC, the students receive higher earnings and increase the productivity of the businesses that employ them. In FY 2022-23, DVC alumni generated \$870.6 million in added income for the region economy, which is equivalent to supporting 8,209 jobs.

Total impact

DVC added \$1.1 billion in income to the Central Contra Costa County 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 \$1.1 billion impact was equal to approximately 2.0% of the total gross regional product (GRP) of Central Contra Costa County. This contribution that the college provided on its own is nearly three times the size of the entire Arts, Entertainment & Recreation industry in the region.

DVC's total impact can also be expressed in terms of jobs supported. The \$1.1 billion impact supported 11,680 county jobs, using the jobs-to-sales ratios specific to each industry in the region. This means that one out of every 34 jobs in Central Contra Costa County is supported by the activities of DVC and its students. In addition, the \$1.1 billion, or 11,680 supported jobs, stemmed from different industry sectors. For instance, among non-education industry sectors, the spending of DVC and its students and the activities of its alumni in the Health Care & Social Assistance industry sector supported 1,340 jobs in FY 2022-23. If the college did not exist, these impacts would not have been generated in Central Contra Costa County.

DVC impacts by industry (jobs supported)



1,340

Health Care & Social Assistance



1,184

Accommodation & Food Services



989

Professional & Technical Services



963

Retail Trade



948

Arts, Entertainment, & Recreation

One out of every 34 jobs in Central Contra Costa County is supported by the activities of DVC and its students.



Investment analysis



An investment analysis evaluates the costs associated with a proposed venture against its expected benefits. The analysis presented here evaluates DVC as an investment from the perspectives of students, taxpayers, and society in California. As with the economic impact analysis, this analysis considers only FY 2022-23 activities.

Student perspective



In FY 2022-23, DVC served 24,743 credit and 189 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 DVC's students in FY 2022-23 amounted to a present value of \$91.2 million, equal to \$30.9 million in out-of-pocket expenses (including future principal and interest on student loans) and \$60.3 million in forgone time and money.

In return for their investment, DVC's students will receive a stream of higher future earnings that will continue to grow throughout their working lives. For example, the average DVC associate degree graduate from FY 2022-23 will see annual earnings that are \$10,500 higher than a person with a high school diploma or equivalent working in California. Over a working lifetime, the benefits of the associate degree over a high school diploma will amount to an undiscounted value of \$441.0 thousand in higher earnings per graduate. The present value of the cumulative higher future earnings that DVC's FY 2022-23 students will receive over their working careers is \$672.5 million.

The students' benefit-cost ratio is 7.4. In other words, for every dollar students invest in DVC in the form of out-of-pocket expenses and forgone time and money, they will receive a cumulative value of \$7.40 in higher future earnings. Annually, the students' investment in DVC has an average annual internal rate of return of 21.3%, which is impressive compared to the U.S. stock market's 30-year average rate of return of 10.1%.

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



Average annual return for DVC students

21.3%



Stock market 30-year average annual return

10.1%



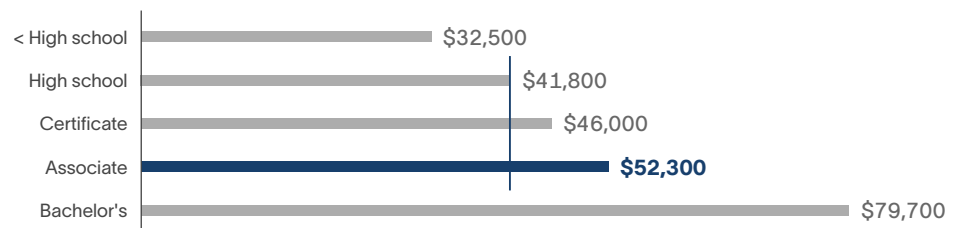
Interest earned on savings account (national deposit rate)

0.5%

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 DVC will see an increase in earnings of **\$10,500** each year compared to a person with a high school diploma or equivalent working in California.



Source: Lightcast employment data



Taxpayer perspective



DVC 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 DVC 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 2022-23 students' working lives, the state and local government will have collected a present value of \$301.9 million in added taxes.

Benefits to taxpayers will also consist of savings generated by the improved lifestyles of DVC students and the corresponding reduced government services. Education is statistically correlated with a variety of lifestyle changes. The education that DVC students receive will generate savings in three main categories: 1) health care, 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. DVC 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 DVC will generate \$35.3 million in savings to state and local taxpayers.

Total taxpayer benefits amount to \$337.3 million, the present value sum of the added tax revenue and public sector savings. Taxpayer costs are \$137.9 million, equal to the amount of state and local government funding DVC received in FY 2022-23. These benefits and costs yield a benefit-cost ratio of 2.4. This means that for every dollar of public money invested in DVC in FY 2022-23, taxpayers will receive a cumulative present value of \$2.40 over the course of the students' working lives. The average annual internal rate of return for taxpayers is 5.5%, which compares favorably to other long-term investments in the public sector.

For every dollar of public money invested in DVC, taxpayers will receive a cumulative value of **\$2.40** over the course of the students' working lives.

Social perspective



Society as a whole in California benefits from the presence of DVC 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 California.

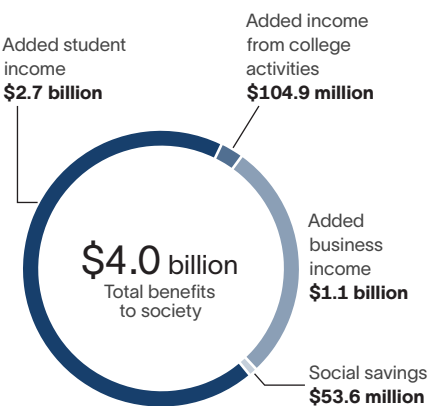
Benefits to society also consist of the savings generated by the improved lifestyles of DVC students. As discussed in the previous section, education is statistically correlated with a variety of lifestyle changes that generate social savings. Note that these costs are avoided by the consumers but are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

Altogether, the social benefits of DVC equal a present value of \$4.0 billion. These benefits include \$2.7 billion in added student income, \$1.1 billion in added business income, \$135.8 million in added income from college activities, as well as \$53.6 million in social savings related to health, the justice system, and income assistance in California. People in California invested a present value total of \$251.6 million in DVC in FY 2022-23. The cost includes all the college and student costs.

The benefit-cost ratio for society is 15.7, equal to the \$4.0 billion in benefits divided by the \$251.6 million in costs. In other words, for every dollar invested in DVC, people in California will receive a cumulative value of \$15.70 in benefits. The benefits of this investment will occur as long as DVC’s FY 2022-23 students remain employed in the state workforce.

Social benefits in California from DVC






Source: Lightcast impact model

Summary of investment analysis results

The results of the analysis demonstrate that DVC 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 DVC. At the same time, taxpayers’ investment in DVC 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
<div>Present value benefits</div> <div>\$672.5 million</div> <div>Present value costs</div> <div>\$91.2 million</div> <div>Net present value</div> <div>\$581.3 million</div>	<div>Present value benefits</div> <div>\$337.3 million</div> <div>Present value costs</div> <div>\$137.9 million</div> <div>Net present value</div> <div>\$199.4 million</div>	<div>Present value benefits</div> <div>\$4.0 billion</div> <div>Present value costs</div> <div>\$251.6 million</div> <div>Net present value</div> <div>\$3.7 billion</div>
<div>Benefit-cost ratio</div> <div>7.4</div> <div>Rate of return</div> <div>21.3%</div>	<div>Benefit-cost ratio</div> <div>2.4</div> <div>Rate of return</div> <div>5.5%</div>	<div>Benefit-cost ratio</div> <div>15.7</div> <div>Rate of return</div> <div>n/a*</div>

* 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 DVC 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. DVC 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, DVC benefits society as a whole in California 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 2022-23 academic and financial reports from DVC, 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.



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.