



The Economic Value of Pasadena City College

COVID-19 disclaimer: The data used to generate the findings within this report reflect extraordinary circumstances caused by the national COVID-19 Pandemic. From a financial perspective, the colleges may have seen an increase in expenditures related to quickly transitioning to online or hybrid education and spending on equipment and staff related to the health and welfare of faculty and students. One-time funding may have been received by the colleges through the CARES Act which included the Higher Education Emergency Relief Fund grant. Additionally, students were directly impacted over this period. Rapid changes in the modality of the colleges' programs can have an impact on students' persistence and completion rates. Changes in income and employment can have adverse effects on a student's ability to maintain enrollment or their choice to enroll in college. Childcare availability, health, and safety considerations may have also had adverse effects on enrollment. Lastly, a number of economic indicators used within this report may be reflective of broader changes to the economy during this time, such as unemployment rates and changes in wages.

PASADENA CITY COLLEGE (PCC) 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 Pasadena Area Community College District (PACCD).^{*} PCC provides students with the education, training, and skills they need to have fulfilling and prosperous careers. Furthermore, PCC is a place for students to meet new people, increase their self-confidence, and promote their overall health and well-being.

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

This study measures the economic impacts created by PCC 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 PACCD 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.



The Pasadena Area Community College District (PACCD), California

PCC influences both the lives of its students and the regional economy.

* For the purposes of this analysis, the Pasadena Area Community College District (PACCD) is comprised of the following ZIP Codes in Los Angeles County: 91001, 91006, 91007, 91731, 91011, 91103, 91105, 91101, 91104, 91106, 91107, 91770, 91108, 91024, 91030, and 91780.

Economic impact analysis



PCC promotes economic growth in the PACCD 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 PACCD, whose expenditures benefit regional vendors. In addition, PCC is one of the primary sources of higher education to the PACCD residents and a supplier of trained workers to regional industries, enhancing overall productivity in the regional workforce.

Operations spending impact



PCC adds economic value to the Pasadena Area Community College District PACCD as an employer of regional residents and a large-scale buyer of goods and services. In FY 2021-22, the college employed 1,390 full-time and part-time faculty and staff, 41% of whom lived in the PACCD. Total payroll at PCC was \$157.8 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 \$133.3 million (excluding construction) on day-to-day expenses related to facilities, supplies, and professional services.

PCC's day-to-day operations spending added \$177.5 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 \$177.5 million in added income is equivalent to supporting 1,487 jobs in the region.

Construction spending impact



PCC 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, PCC's construction spending generated \$2.8 million in added income, which is equivalent to supporting 37 jobs.

Student spending impact



Around 67% of students attending PCC originated from outside the region in FY 2021-22, and some of these students relocated to the PACCD to attend PCC. These students may not have come to the region if the college did not exist. In

Impacts created by PCC in FY 2021-22



Operations spending impact

\$177.5 million

+



Construction spending impact

\$2.8 million

+



Student spending impact

\$23.9 million

+



Alumni impact

\$475.8 million



Total economic impact

\$679.9 million

OR

Jobs supported

6,995



addition, some in-region students, referred to as retained students, would have left the PACCD if not for the existence of PCC. While attending the college, these relocated and retained students spent money on groceries, accommodation, transportation, and other household expenses. This spending generated \$23.9 million in added income for the regional economy in FY 2021-22, which supported 322 jobs in the PACCD.

Alumni impact



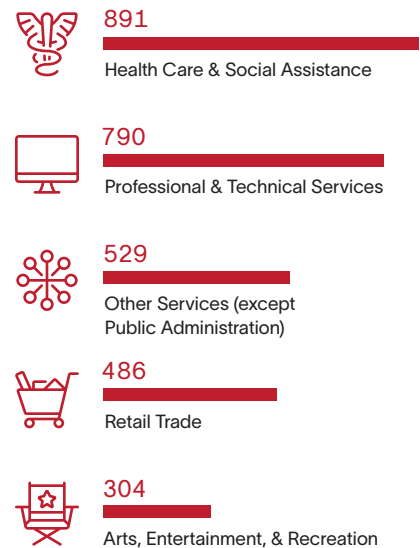
The education and training PCC provides for regional residents has the greatest impact. Since the establishment of the college, students have studied at PCC and entered the regional workforce with greater knowledge and new skills. Today, thousands of former PCC students are employed in the PACCD. As a result of their education from PCC, the students receive higher earnings and increase the productivity of the businesses that employ them. In FY 2021-22, PCC alumni generated \$475.8 million in added income for the regional economy, which is equivalent to supporting 5,148 jobs.

Total impact

PCC added \$679.9 million in income to the PACCD 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 \$679.9 million impact was equal to approximately 1.7% of the total gross regional product (GRP) of the PACCD. This contribution that the college provided on its own is larger than the entire Transportation & Warehousing industry in the region.

PCC's total impact can also be expressed in terms of jobs supported. The \$679.9 million impact supported 6,995 regional jobs, using the jobs-to-sales ratios specific to each industry in the region. This means that one out of every 50 jobs in the PACCD is supported by the activities of PCC and its students. In addition, the \$679.9 million, or 6,995 supported jobs, stemmed from different industry sectors. For instance, among non-education industry sectors, the spending of PCC and its students and the activities of its alumni in the Health Care & Social Assistance industry sector supported 891 jobs in FY 2021-22. If the college did not exist, these impacts would not have been generated in the PACCD.

PCC impacts by industry (jobs supported)



One out of every 50 jobs in the Pasadena Area Community College District (PACCD) is supported by the activities of PCC 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 PCC as an investment from the perspectives of students, taxpayers, and society in California.

Student perspective



In FY 2021-22, PCC served 31,191 credit and 1,597 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 PCC's students in FY 2021-22 amounted to a present value of \$98.5 million, equal to \$31.5 million in out-of-pocket expenses (including future principal and interest on student loans) and \$67.0 million in forgone time and money.

In return for their investment, PCC's students will receive a stream of higher future earnings that will continue to grow throughout their working lives. For example, the average PCC associate degree graduate from FY 2021-22 will see annual earnings that are \$10,300 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 \$412 thousand in higher earnings per graduate. The present value of the cumulative higher future earnings that PCC's FY 2021-22 students will receive over their working careers is \$644.7 million.

The students' benefit-cost ratio is 6.5. In other words, for every dollar students invest in PCC in the form of out-of-pocket expenses and forgone time and money, they will receive a cumulative value of \$6.50 in higher future earnings. Annually, the students' investment in PCC has an average annual internal rate of return of 21.9%, 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 PCC



Average annual return for PCC students
21.9%



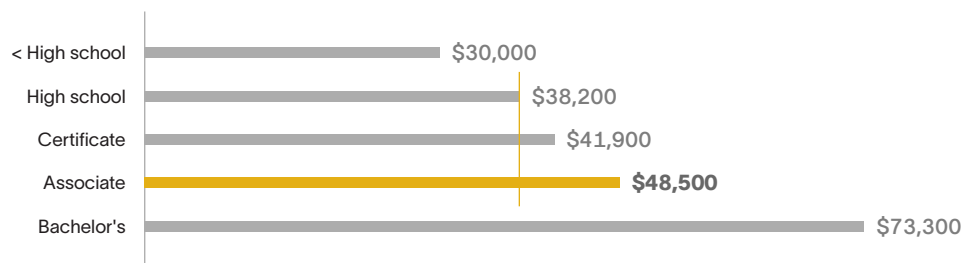
Stock market 30-year average annual return
9.6%



Interest earned on savings account (national deposit cap)
0.4%

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

The average associate degree graduate from PCC will see an increase in earnings of **\$10,300** each year compared to a person with a high school diploma or equivalent working in California.



Source: Lightcast employment data.

Taxpayer perspective



PCC 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 PCC 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 \$234.9 million in added taxes.

Benefits to taxpayers will also consist of savings generated by the improved lifestyles of PCC students and the corresponding reduced government services. Education is statistically correlated with a variety of lifestyle changes. The education that PCC 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. PCC 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 PCC will generate \$32.5 million in savings to state and local taxpayers.

Total taxpayer benefits amount to \$267.4 million, the present value sum of the added tax revenue and public sector savings. Taxpayer costs are \$215.1 million, equal to the amount of state and local government funding PCC received in FY 2021-22. These benefits and costs yield a benefit-cost ratio of 1.2. This means that for every dollar of public money invested in PCC in FY 2021-22, taxpayers will receive a cumulative present value of \$1.20 over the course of the students' working lives. The average annual internal rate of return for taxpayers is 1.4%, which compares favorably to other long-term investments in the public sector.

For every dollar of public money invested in PCC, taxpayers will receive a cumulative value of **\$1.20** over the course of the students' working lives.

Social perspective



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

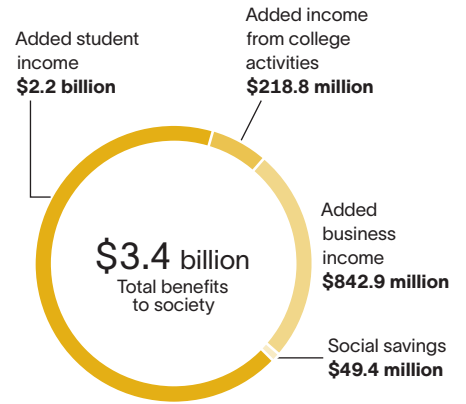
Benefits to society also consist of the savings generated by the improved lifestyles of PCC students. As discussed in the previous section, education is statistically correlated with a variety of lifestyle changes that generate social savings. Note that these costs are avoided by the consumers but are 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 PCC equal a present value of \$3.4 billion. These benefits include \$2.2 billion in added student income, \$842.9 million in added business income, \$218.8 million in added income from college activities, as well as \$49.4 million in social savings related to health, the justice system, and income assistance in California. People in California invested a present value total of \$391.0 million in PCC in FY 2021-22. The cost includes all the college and student costs.

The benefit-cost ratio for society is 8.6, equal to the \$3.4 billion in benefits divided by the \$391.0 million in costs. In other words, for every dollar invested in PCC, people in California will receive a cumulative value of \$8.60 in benefits. The benefits of this investment will occur for as long as PCC's FY 2021-22 students remain employed in the state workforce.

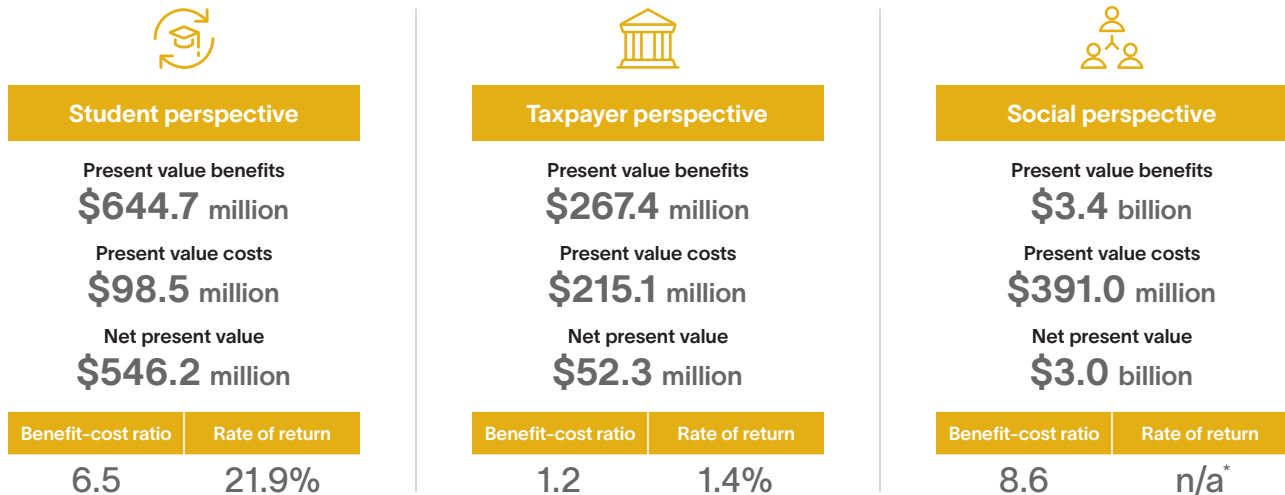
Social benefits in California from PCC



Source: Lightcast impact model.

Summary of investment analysis results

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



* 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 PCC 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. PCC 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, PCC 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 2021-22 academic and financial reports from PCC, 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 PCC 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.