

Chaffey College

The Economic Value of Chaffey College

# EXECUTIVE SUMMARY



**C**HAFFEY College (Chaffey) 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 Chaffey Community College District.\* Chaffey provides students with the education, training, and skills they need to have fulfilling and prosperous careers. Furthermore, Chaffey is a place for students to meet new people, increase their self-confidence, and promote their overall health and well-being.

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

This study measures the economic impacts created by Chaffey 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) 2017-18. Impacts on the Chaffey Community College District 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 Chaffey Community College District is comprised of the following ZIP codes in San Bernadino County: 91701, 91729, 91730, 91737, 91739, 92331, 92334, 92335, 92336, 92337, 91758, 91761, 91762, 91764, 91784, 91785, 91786, 91708, 91710, 91763, 91709, 91743, and 91759.

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

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# Economic impact analysis

Chaffey promotes economic growth in the Chaffey Community College District 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 Chaffey Community College District, whose expenditures benefit regional vendors. In addition, Chaffey is a primary source of higher education to the Chaffey Community College District residents and a supplier of trained workers to regional industries, enhancing overall productivity in the regional workforce.

## Operations spending impact



Chaffey adds economic value to the Chaffey Community College District as an employer of regional residents and a large-scale buyer of goods and services. In FY 2017-18, the college employed 1,494 full-time and part-time faculty and staff, 54% of whom lived in the Chaffey Community College District. Total payroll at Chaffey was \$109.7 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 \$33 million on day-to-day expenses related to facilities, supplies, and professional services.

Chaffey's day-to-day operations spending added \$119.9 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 \$119.9 million in added income is equivalent to supporting 1,628 jobs in the region.

## Construction spending impact



Chaffey 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 2017-18, Chaffey's construction spending generated \$11.9 million in added income, which is equivalent to supporting 150 jobs.

## Student spending impact



Around 30% of students attending Chaffey originated from outside the region in FY 2017-18, and some of these students relocated to the Chaffey Community College District to attend Chaffey.

IMPACTS CREATED  
BY CHAFFEY IN FY 2017-18



**\$119.9 million**  
Operations Spending Impact



**\$11.9 million**  
Construction Spending Impact



**\$25.9 million**  
Student Spending Impact



**\$327.9 million**  
Alumni Impact



**\$485.6 million**  
TOTAL IMPACT

- OR -

**6,381**  
JOBS SUPPORTED

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 Chaffey Community College District if not for the existence of Chaffey. While attending the college, these relocated and retained students spent money on groceries, accommodation, transportation, and other household expenses. This spending generated \$25.9 million in added income for the regional economy in FY 2017-18, which supported 559 jobs in the Chaffey Community College District.

## Alumni impact



The education and training Chaffey provides for regional residents has the greatest impact. Since its establishment, students have studied at Chaffey and entered the regional workforce with greater knowledge and new skills. Today, thousands of former Chaffey students are employed in the Chaffey Community College District. As a result of their Chaffey educations, the students receive higher earnings and increase the productivity of the businesses that employ them. In FY 2017-18, Chaffey alumni generated \$327.9 million in added income for the regional economy, which is equivalent to supporting 4,044 jobs.

## Total impact

Chaffey added \$485.6 million in income to the Chaffey Community College District 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 \$485.6 million impact was equal to approximately 1.1% of the total gross regional product (GRP) of the Chaffey Community College District. This contribution that the college provided on its own was over twice as large as the entire Arts, Entertainment, & Recreation industry in the region.

Chaffey's total impact can also be expressed in terms of jobs supported. The \$485.6 million impact supported 6,381 regional jobs, using the jobs-to-sales ratios specific to each industry in the region. This means that one out of every 84 jobs in the Chaffey Community College District is supported by the activities of Chaffey and its students. In addition, the \$485.6 million, or 6,381 supported jobs, stemmed from different industry sectors. Among non-education industry sectors, Chaffey's spending and alumni in the Retail Trade industry sector supported 795 jobs in FY 2017-18. These are impacts that would not have been generated without the college's presence in the Chaffey Community College District.

### CHAFFEY IMPACTS BY INDUSTRY (JOBS SUPPORTED)



**One out of every 84 jobs in the Chaffey Community College District is supported by the activities of Chaffey 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 considers Chaffey as an investment from the perspectives of students, taxpayers, and society in California.

## Student perspective



In FY 2017-18, Chaffey served 29,932 credit and 412 non-credit students. In order to attend the college, the students paid for tuition, fees, books, and supplies. They also gave up money they would have otherwise earned had they been working instead of attending college. The total investment made by Chaffey's students in FY 2017-18 amounted to a present value of \$130.1 million, equal to \$34.1 million in out-of-pocket expenses and \$96 million in forgone time and money.

In return for their investment, Chaffey's students will receive a stream of higher future earnings that will continue to grow throughout their working lives. For example, the average Chaffey associate degree graduate from FY 2017-18 will see annual earnings that are \$8,900 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 \$373.8 thousand in higher earnings per graduate. The present value of the cumulative higher future earnings that Chaffey's FY 2017-18 students will receive over their working careers is \$792.3 million.

### STUDENTS SEE A HIGH RATE OF RETURN FOR THEIR INVESTMENT IN CHAFFEY



20.4%

Average annual return for Chaffey students



9.9%

Stock market 30-year average annual return

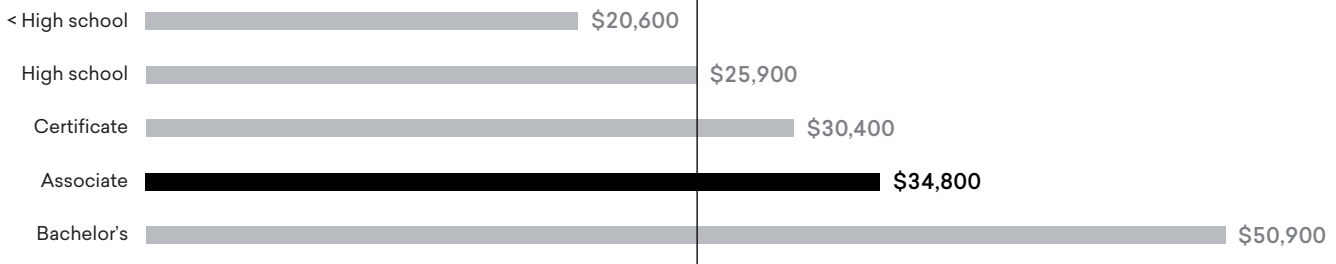


0.8%

Interest earned on savings account (National Rate Cap)

Source: Forbes' S&P 500, 1989-2018. FDIC.gov, 6-2019.

The average associate degree graduate from Chaffey will see an increase in earnings of **\$8,900** each year compared to a person with a high school diploma or equivalent working in California.



Source: Emsi employment data.

The students' benefit-cost ratio is 6.1. In other words, for every dollar students invest in Chaffey, in the form of out-of-pocket expenses and forgone time and money, they will receive a cumulative value of \$6.10 in higher future earnings. Annually, the students' investment in Chaffey has an average annual internal rate of return of 20.4%, which is impressive compared to the U.S. stock market's 30-year average rate of return of 9.9%.

## Local taxpayer perspective



Chaffey generates more in local tax revenue than it takes. These benefits consist primarily of taxes that the local government will collect from the added revenue created in the region. As Chaffey students earn more, they will make higher tax payments. We use regional earnings to calculate students' higher earnings, and thus, increased local tax revenue. Employers will also make higher tax payments as they increase their output and purchase more supplies and services. By the end of the FY 2017-18 students' working careers, the local government will have collected a present value of \$66.5 million in added taxes.

Benefits to local taxpayers also consist of the savings generated by the improved lifestyles of students that settle in the region and the proportionally reduced government expenditures. Education is statistically correlated with a variety of lifestyle changes that generate taxpayer savings across three main categories: 1) healthcare, 2) crime, and 3) income assistance. Improved health will lower students' demand for national health care services. In addition, students will be less likely to interact with the criminal justice system, resulting in a reduced demand for law enforcement and victim costs. Chaffey 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 to these statistical benefits, please contact the college for a copy of the main report. All of these benefits associated with increased education will generate a present value of \$18.6 million in savings to local taxpayers.

Total benefits to taxpayers equal \$85.1 million, equal to the sum of the added taxes and public sector savings. Comparing this to the taxpayer costs of \$49.9 million—equal to the funding that Chaffey received from the local government during the analysis year—yields a benefit-cost ratio of 1.7. This means that for every dollar of public money invested in Chaffey, local taxpayers receive a cumulative value of \$1.70 over the course of the students' working lives. The average annual rate of return is 5.2%, a solid investment that compares favorably with other long-term investments in both the private and public sectors.

\* 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.



### STUDENT PERSPECTIVE

**\$792.3 million**  
Present value benefits

**\$130.1 million**  
Present value costs

**\$662.1 million**  
Net present value

Benefit-cost ratio      Rate of return

6.1

20.4%



### LOCAL TAXPAYER PERSPECTIVE

**\$85.1 million**  
Present value benefits

**\$49.9 million**  
Present value costs

**\$35.2 million**  
Net present value

Benefit-cost ratio      Rate of return

1.7

5.2%



### STATE & LOCAL TAXPAYER PERSPECTIVE

**\$298.3 million**  
Present value benefits

**\$129 million**  
Present value costs

**\$169.3 million**  
Net present value

Benefit-cost ratio      Rate of return

2.3

6.0%



### SOCIAL PERSPECTIVE

**\$4.1 billion**  
Present value benefits

**\$284 million**  
Present value costs

**\$3.8 billion**  
Net present value

Benefit-cost ratio      Rate of return

14.5

n/a\*

## State and local taxpayer perspective



Similar to the local taxpayer perspective, benefits to state and local taxpayers consist of the increase in state and local tax revenues and reduced government expenditures due to students' improved lifestyles.

Because we are now considering state government, we use state level earnings to calculate the present value of the students' future higher earnings stream and the subsequent added state tax revenue. By the end of the FY 2017-18 students' working careers, the state and local government will have collected a present value of \$251.6 million in added tax revenues.

Just as local taxpayers benefit from students' improved lifestyles, state taxpayers benefit from reduced government expenditures as well. To calculate these benefits, we take into account the portion of students that settle in the region and in the state. State and local government savings from health-related programs, crime savings, and income assistance savings will generate a present value of \$46.7 million in savings over the course of the FY 2017-18 students' working lives.

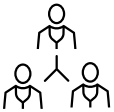
Total benefits to taxpayers equal \$298.3 million, equal to the sum of the added tax revenues and public sector savings. Comparing this to the taxpayer costs of \$129 million—equal to the funding that Chaffey received from the state and local government during the analysis year—yields a benefit-cost ratio of 2.3. This means that for every dollar of public money invested in Chaffey, taxpayers receive a cumulative value of \$2.30 over the course of the students' working lives. The average annual rate of return is 6.0%, a solid investment that compares favorably with other long-term investments in both the private and public sectors.

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*For every dollar of public money invested in Chaffey, taxpayers will receive a cumulative value of **\$2.30** over the course of the students' working lives.*

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## Social perspective



Society as a whole in California benefits from the presence of Chaffey in two major ways. Primarily, society benefits from an increased economic base in the state. This is attributed to higher student earnings and increased business output, which raise economic prosperity in California.

Benefits to society also consist of the savings generated by the improved lifestyles of Chaffey 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. Savings related to crime include reduced security expenditures and insurance administration, lower victim costs, and reduced expenditures by the criminal justice system. 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.

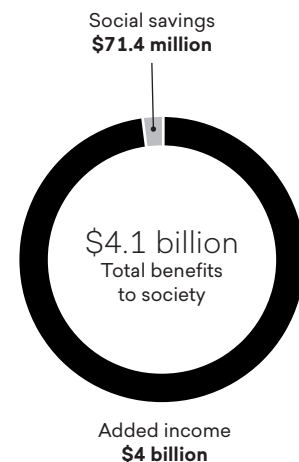
Altogether, the social benefits of Chaffey equal a present value of \$4.1 billion. These benefits include \$4 billion in added income through students' increased lifetime earnings and increased business output, as well as \$71.4 million in social savings related to health, crime, and income assistance in California. People in California invested a present value total of \$284 million in Chaffey in FY 2017-18. The cost includes all the college and student costs.

The benefit-cost ratio for society is 14.5, equal to the \$4.1 billion in benefits divided by the \$284 million in costs. In other words, for every dollar invested in Chaffey, people in California will receive a cumulative value of \$14.50 in benefits. The benefits of this investment will occur for as long as Chaffey's FY 2017-18 students remain employed in the state workforce.

## Summary of investment analysis results

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

### SOCIAL BENEFITS IN CALIFORNIA FROM CHAFFEY





# Conclusion

The results of this study demonstrate that Chaffey 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. Chaffey 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, Chaffey 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 2017-18 academic and financial reports from Chaffey, industry and employment data from the U.S. Bureau of Labor Statistics and U.S. Census Bureau, outputs of Emsi'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.

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**multiple perspectives.**

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