



Economic Contribution of Contra Costa Community College District

*Analysis of Investment Effectiveness
and Economic Growth*

Executive Summary

Prepared by CBenefits, Inc.:
M. Henry Robison, Ph.D. and
Kjell A. Christophersen, Ph.D.

HIGHLIGHTS

- Students enjoy an attractive **21%** annual return on their investment of time and money.
- For every \$1 the students invest in CCCCDC, they receive a cumulative **\$7.10** in higher future earnings over the course of their working careers (after discounting).
- Taxpayers see a real money “book” return of **10%** on their annual investments in CCCCDC.
- The State of California benefits from improved health and reduced welfare, unemployment, and crime, saving the public some **\$17.1 million** per year each year that students are in the workforce.
- The Contra Costa County economy receives roughly **\$3.5 billion** in regional income each year due to the actions of CCCCDC and its students. This figure amounts to **9%** of a typical year’s economic growth

INTRODUCTION

How do the Contra Costa County economy and the State of California benefit from the presence of Contra Costa Community College District?

An obvious question often asked, but rarely answered with more than anecdotes. In this study, CCbenefits Inc. applies a comprehensive economic model designed to quantify the economic benefits of community and technical colleges and translate these into common sense benefit/cost and investment terms. The study tracks four types of benefits:

1. **Regional Economic Benefits** – Creation of regional income;

2. **Student Perspective** – Higher earnings captured by students;
3. **Taxpayer Perspective** – Social benefits and avoided costs;
4. **Investment Analysis** – Return to taxpayers for their district support.

The economic impact model has been subjected to peer review and field-tested on more than 500 community and technical colleges in the U.S. and Canada. Model results are based on solid economic theory, carefully drawn functional relationships, and a wealth of national and local education-related data.

RESULTS

For a more in-depth discussion of the results, the reader is encouraged to consult the Main Report, “Economic Contribution of Contra Costa Community College District,” containing detailed assumptions, context, and computation procedures.

➤ **Regional Economic Benefits**

CCCCDC affects the local economy in three ways: 1) through its local purchases, including wages paid to faculty and staff, 2) through spending of students who come from outside the region, and 3) through a human capital effect stemming from an increase in the skill base of the local workforce. These effects break down as follows:

- *CCCCDC Operations Spending*

CCCCDC creates regional income through the earnings of its faculty and staff, as well as through its own operating and capital



Based on current enrollment, turnover, and the growth of instruction over time, the regional workforce embodies an estimated 12.7 million credits of past and present instruction. The accumulated contribution of past and present CCCCD instruction adds some \$3.4 billion in regional income to the

current economy of Contra Costa County.

In sum, CCCCD contributes a total of \$3.5 billion in regional labor and non-labor income to the Contra Costa County economy each year.

➤ Student Perspective

Benefits of higher education are most obvious from the student perspective: students sacrifice current earnings (as well as money to pay for tuition) in return for a lifetime of higher earnings. For every credit completed, CCCCD students earn, on average, \$198 more per year each year they are in the workforce. Alternatively, for every full-time year they attend they earn an additional \$5,940 per year. Aggregate higher earnings for all exiting students amount to some \$143.3 million per year for each year they remain in the workforce.

From an investment standpoint, CCCCD students enjoy a 21% rate of return on their investments of time and money. This compares favorably with returns on other investments, e.g., long-term return on U.S. stocks and bonds. The corresponding

expenditures. Adjusting for taxes and other monies withdrawn from the local economy in support of CCCCD, it is estimated that the present-day Contra Costa County economy receives roughly \$112.9 million in labor and non-labor income each year due to CCCCD operations and capital spending.

- *Student Spending Effect*

About 14% of CCCCD's students come from outside Contra Costa County. While in the region, these students spend money to buy books and supplies, rent apartments, purchase food, pay for transportation, attend sports events, go to movies, and so on. These expenditures create revenues, jobs, and incomes for local businesses. It is estimated that spending of CCCCD's out-of-region students generates approximately \$14.9 million each year in regional income in Contra Costa County.

- *Past Student Productivity*

Each year students leave CCCCD and join or rejoin the local workforce. Their added skills translate to higher income and a more robust Contra Costa County economy.

benefit/cost ratio is 7.1, i.e., for every \$1 students invest in CCCC education, they receive a cumulative of \$7.10 in higher future earnings over their working careers. This is a real return that accounts for any discounting that occurs during the entire period. The time needed to recover all costs is 7 years.

➤ Taxpayer Perspective

State and local government spent \$202.4 million in support of CCCC during the analysis year. Is this a good use of taxpayer money? Our analysis indicates that the answer is a resounding yes: Returns far outweigh costs, and the attractiveness of the taxpayer investment is even stronger when a collection of incidental social savings is included in the assessment.

For example, persons with higher education are less likely to smoke or abuse alcohol, draw welfare or unemployment benefits, or commit crimes. This translates into associated dollar savings (avoided costs) amounting to some \$24 per credit per year, counted as an indirect benefit of CCCC education. **When aggregated across all exiting students, the State of California benefits from \$17.1 million worth of avoided costs per year, each year that students are in the workforce.** Social savings, commonly known as externalities, break down as follows:

- *Improved Health*

Employers in the State of California see health-related absenteeism decline by 17,400 days per year, with a corresponding annual dollar savings of approximately \$2.6

million. The state benefits from health-related savings of roughly 1,040 fewer smokers and 220 fewer alcohol abusers. Corresponding dollar savings are \$3.1 million and \$1.5 million per year, now and into the future (these savings include insurance premiums, co-payments and deductibles, and withholding for Medicare and Medicaid).

- *Reduced Crime*

Incarceration drops with each year of higher education. In the State of California, about 480 fewer individuals will be incarcerated, resulting in annual savings of \$3.4 million (combined savings from reduced arrest, prosecution, jail, and reform costs). Reductions in victim costs (e.g., property damage, legal expenses, lost workdays, etc.) result in savings of \$1.1 million per year. Finally, that people are employed rather than incarcerated adds \$2.6 million of earnings per year to the economy.

- *Reduced Welfare/Unemployment*

There will be around 1,420 fewer people on welfare, and 370 fewer drawing unemployment benefits, saving taxpayers some \$2.4 million and \$454,000 per year, respectively.

➤ Investment Analysis

The return on a year's worth of state and local government investment in CCCC is obtained by projecting associated educational benefits into the future, discounting them back to the present, and weighing these against the \$202.4 million state and local taxpayers spent during the analysis year to support the district. Two

investment perspectives are possible, one broad and one narrow.

- *Broad Perspective*

Taxpayers expect their annual investment in CCCCD to result in higher lifetime earnings for students and social savings from lifestyle changes (reduced crime, welfare and unemployment, and improvements in health). From a broad investment perspective, the value of all future income and associated social savings is compared to the year's worth of state and local taxpayer support that made the benefits possible. Following this procedure, it is estimated that CCCCD provides a benefit/cost ratio of 16, i.e., every dollar of state and local tax money invested in CCCCD today returns a cumulative of \$16 over the course of the students' working career. As above, this is a real return, accounting for any discounting that may occur during the established time horizon. The *nominal* return would be significantly higher.

- *Narrow Perspective*

The narrow perspective limits the benefit stream to state and local government budgets, namely, increased tax collections and expenditure savings. For example, in place of total increased income, the narrow perspective includes only increased state and local tax receipts from those higher incomes. Similarly, in place of overall crime, welfare, unemployment and health savings, the narrow perspective includes only those portions that translate to actual reductions in state and local government expenditures.

Note here that it is normal for the state government to undertake activities wanted by the public, but which are unprofitable in the marketplace. This means that positive economic returns are generally not expected from government investments. From the narrow taxpayer perspective, therefore, even a small positive return (a benefit/cost ratio equal to or just greater than 1, or a rate of return equal to or just greater than the 4% discount rate used in this analysis) would be a favorable outcome, certainly one that justifies continued taxpayer support of the district. For CCCCD, narrow perspective results greatly exceed minimum expectations.

Results indicate strong and positive returns: a rate of return of 10%, and a benefit/cost ratio of 2.5 (every dollar of state and local tax money invested in CCCCD today returns \$2.50).

CONCLUSION

The results of this study demonstrate that CCCCDC is a sound investment from multiple perspectives. The district enriches the lives of students and increases their lifetime incomes. It benefits taxpayers by

generating increased tax revenues from an enlarged economy and reducing the demand for taxpayer-supported social services. Finally, it contributes to the vitality of both the local and state economies.

Benefits at a Glance

Regional Analysis				
Regional Economic Growth				
College operations effect			\$112,884,800	
Student spending effect			\$14,858,300	
Past student productivity effect			\$3,413,953,000	
TOTAL			\$3,541,696,100	
Annual Benefits				
<i>Higher earnings</i>				
Aggregate (all students)			\$143,273,000	
Per credit hour equivalent (CHE)			\$198	
Per full time student			\$5,940	
<i>Social savings</i>				
Aggregate (all students)			\$17,125,000	
Per credit hour equivalent (CHE)			\$24	
Per full time student			\$710	
Investment Analysis		Rate of Return	Benefit/Cost	Payback (Years)
Students		20.9%	7.1	7.1
Taxpayers: Broad Perspective		NA	16.4	NA
Taxpayers: Narrow Perspective		10.2%	2.5	12.9

Source: See Volume 1: Main Report and Volume 2: Detailed Results.

This short summary report is one of six products generated for this impact study. In addition, one long report intended for economists and college institutional researchers lays out detailed assumptions and analysis. Another report provides detailed tabular results by gender, ethnicity, and entry level of education, and a fact sheet contains highlights of study results at a glance. The study also includes a write-up in layman's terms about differences between broad and narrow taxpayer perspectives. Lastly, a PowerPoint presentation shows main results for college presidents to adapt and use in speeches before state legislators and other education stakeholders.