

THE ECONOMIC VALUE

Of San Bernardino Community College District



JANUARY 2016

ANALYSIS OF THE ECONOMIC IMPACT & RETURN ON INVESTMENT OF EDUCATION

San Bernardino Community College District (SBCCD) creates value in many ways. The district plays a key role in helping students increase their employability and achieve their individual potential. It provides students with the skills they need to have a fulfilling and prosperous career. Further, it supplies an environment for students to meet new people, increase their self-confidence, and promote their overall health and well-being.

The value of SBCCD influences both the lives of students and also the regional economy. The district serves a range of industries in the SBCCD Service Area, supports local businesses, and benefits society as a whole in California from an expanded economy and improved quality of life. The benefits created by SBCCD even extend to the state and local government through increased tax revenues and public sector savings.

The purpose of this study is to investigate the economic impacts created by SBCCD on the business community and the benefits that the district generates in return for the investments made by its key stakeholder groups—students, taxpayers, and society. The region the district serves is defined as San Bernardino and Riverside counties. The following two analyses are presented:

- **ECONOMIC IMPACT ANALYSIS**
- **INVESTMENT ANALYSIS**

All results reflect student and financial data for Fiscal Year (FY) 2013-14. Impacts on the regional business community are reported under the economic impact analysis. Results are measured in terms of added income. The return on investment to students, taxpayers, and society are reported under the investment analysis. Both analyses are described more fully in the following sections.

ECONOMIC IMPACT ANALYSIS

SBCCD promotes economic growth in the SBCCD Service Area in a variety of ways. The district is an employer and buyer of goods and services, and the living expenses of students benefit local businesses. In addition, SBCCD is a primary source of education to the SBCCD Service Area residents and a supplier of trained workers to the SBCCD Service Area industries.

**TABLE 1. IMPACTS CREATED BY SBCCD
IN FY 2013-14**

ADDED INCOME	JOBS
\$77.4 MILLION	1,521
Operations spending impact	
\$16.4 MILLION	301
Student spending impact	
\$528 MILLION	9,443
Alumni impact	
\$621.8 MILLION	11,265
Total impact	

OPERATIONS SPENDING IMPACT

SBCCD is an important employer in the SBCCD Service Area. In FY 2013-14, the district employed 1,388 full-time and part-time faculty and staff. Of these, 76% lived in the SBCCD Service Area. Total payroll at SBCCD was \$67.3 million, much of which was spent in the region for groceries, rent, dining out, clothing, and other household expenses.

SBCCD is itself a large-scale buyer of goods and services. In FY 2013-14 the district spent \$15.4 million to cover its expenses for facilities, professional services, and supplies.

SBCCD added \$77.4 million in added income to the region during the analysis year as a result of its day-to-day operations. This figure represents the district's payroll, the multiplier effects generated by the spending of the district and its employees, and a downward adjustment to account for funding that the district received from state and local sources.

IMPACT OF STUDENT SPENDING

Around 4% of students attending SBCCD originated from outside the region in FY 2013-14. Some of these students relocated to the SBCCD Service Area. These students would not have come to the region if the district did not exist. In addition, a number of in-region students would have left the area for other education opportunities if not for the existence of SBCCD. While attending the district, these retained students spent \$35.2 million to purchase groceries, rent accommodation, pay for transportation, and so on. A significant portion of these expenditures occurred in the region, generating \$16.4 million in added income in the region economy during the analysis year.

FIGURE 1. SBCCD ALUMNI WORKING IN-REGION TODAY

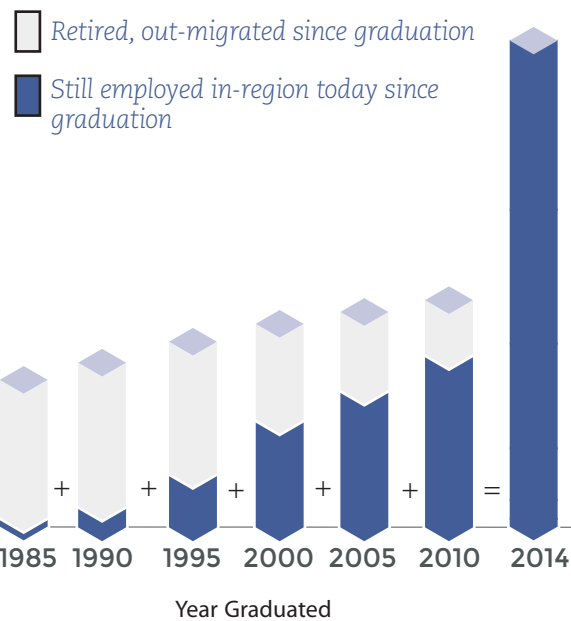


TABLE 2. SBCCD IMPACT BY INDUSTRY

INDUSTRY	ADDED INCOME (THOUSANDS)	JOBS
Government, Non-Education	\$91,332	825
Health Care and Social Assistance	\$59,073	2,187
Educational Services	\$45,388	1,057
Manufacturing	\$43,001	250
Retail Trade	\$21,568	328

ALUMNI IMPACT

The education and training SBCCD provides for region residents results in the greatest impact. As shown in Figure 1, since the district was established, students have studied at SBCCD and entered the regional workforce with new skills. Today, thousands of former students are employed in the SBCCD Service Area.

During the analysis year, past and present students of SBCCD generated \$528 million in added income for the region. This figure represents the higher earnings that students earned during the year, the increased output of the businesses that employed the students, and the multiplier effects that occurred as students and their employers spent money at other businesses.

TOTAL IMPACT

The overall impact of SBCCD on the local business community during the analysis year amounted to \$621.8 million in added income, equal to the sum of the operations spending impact, the student spending impact, and the alumni impact. The \$621.8 million in added income was equal to approximately 0.5% of the GRP of the SBCCD Service Area. By comparison, this contribution that the district provides on its own is almost as large as Agriculture, Forestry, Fishing, and Hunting industry.

The total impact is also expressed in terms of the jobs supported by the added income; they are calculated by jobs-to-sales ratios specific to each industry. Overall, the \$621.8 million impact supports 11,265 jobs.

A portion of the total \$621.8 million is broken out into an industry-by-industry impact ordered by added income. Table 2 outlines the top industries impacted by SBCCD. Because industries have different jobs-to-sales ratios, the associated jobs supported by the SBCCD impact differ by industry. Nonetheless, these are impacts that would not have been generated without the district presence.

INVESTMENT ANALYSIS

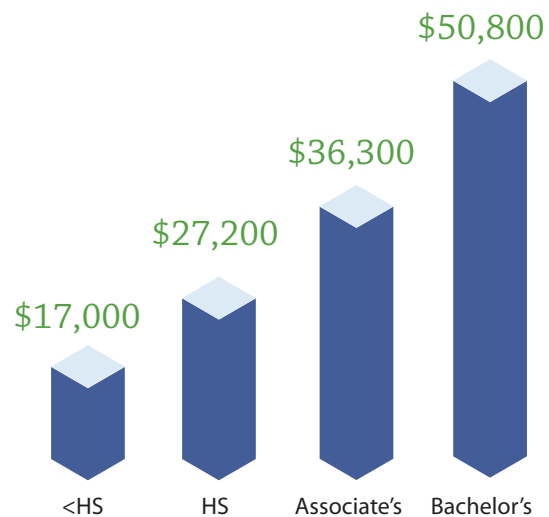
Investment analysis is the process of evaluating total costs and measuring these against total benefits to determine whether or not a proposed venture will be profitable. If benefits outweigh costs, then the investment is worthwhile. If costs outweigh benefits, then the investment will lose money and is considered unprofitable. This study considers SBCCD as an investment from the perspectives of students, taxpayers, and society. The backdrop for the analysis is the entire California economy.

STUDENT PERSPECTIVE

In FY 2013-14, SBCCD served 24,219 credit students and 9,215 non-credit students. In order to attend college, students paid for tuition, fees, books, and supplies. They also gave up money that they would have otherwise earned had they been working instead of attending college. The total investment made by SBCCD's students in FY 2013-14 amounted to \$156.9 million, equal to \$17.5 million in out-of-pocket expenses plus \$139.4 million in forgone time and money.

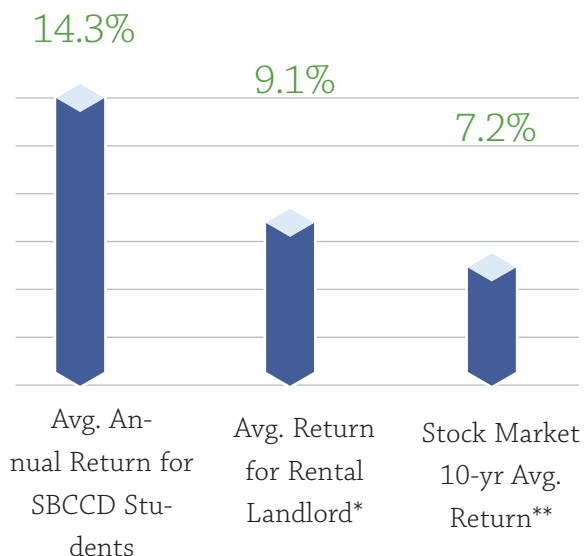
In return for their investment, SBCCD's students will receive a stream of higher future earnings that will continue to grow through their working lives. As shown in Figure 2, mean earnings levels at the midpoint of the average-aged worker's career increase as people achieve higher levels of education. For example, the average associate's degree completer from SBCCD will see an increase in earnings of \$9,100 each year compared to someone with a high school diploma or equivalent. Over a working lifetime, this increase in earnings amounts to an undiscounted value of approximately \$373,100 in higher earnings.

FIGURE 2. HIGHER EARNINGS BY EDUCATION LEVEL AT CAREER MIDPOINT IN THE SBCCD SERVICE AREA



Source: EMSI complete employment data.

FIGURE 3. STUDENT RATE OF RETURN



*RealityTrac's Q3 2014

**Forbes's S&P 500, 1994-2014.

The present value of the higher future earnings that SBCCD's students will receive over their working careers is \$550.7 million. Dividing this value by the \$156.9 million in student costs yields a benefit-cost ratio of 3.5. In other words, for every \$1 students invest in SBCCD in the form of out-of-pocket expenses and forgone time and money, they receive a cumulative of \$3.50 in higher future earnings. The average annual rate of return for students is 14.3%. This is an impressive return, especially when compared to the 10-year average 7.2% return to the US stock market (Figure 3).

TAXPAYER PERSPECTIVE

SBCCD generates more in tax revenue than it takes. 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 SBCCD students earn more, they will make higher tax payments. Employers will also make higher tax payments as they increase their output and purchase more supplies and services. By the end of the FY 2013-14 students' working careers, the state and local government will have collected a present value of \$217.6 million in added taxes.

Benefits to taxpayers consist of the savings generated by the improved lifestyles of students 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) health, 2) crime, and 3) unemployment. Improved health habits lower the students' demand for national health care services. Students are also less likely to commit crimes, so the demand for law enforcement and criminal justice services is reduced (study references are available in the main report). Students are also more employable, so the demand for welfare and unemployment benefits, such as earnings assistance and welfare benefits, is reduced. For a list of study references to these statistical benefits, please contact the district for a copy of the main report. All of these benefits will generate a present value of \$23.1 million in savings to state and local taxpayers.

Total benefits to taxpayers equal \$240.8 million, equal to the sum of the added taxes and public sector savings. Comparing this to the taxpayer costs of \$73.3 million—equal to the funding that SBCCD received from the state and local government during the





analysis year—yields a benefit-cost ratio of 3.3. This means that for every \$1 of public money invested in SBCCD, taxpayers receive a cumulative value of \$3.30 over the course of the students’ working lives. The average annual rate of return is 9.8%, a solid investment that compares favorably with other long-term investments in both the private and public sectors (Figure 3).

SOCIAL PERSPECTIVE

Society as a whole within California benefits from the presence of SBCCD in two major ways. The first and largest benefit that society receives is an increased state economic base. As discussed in the previous section, the higher student earnings and increased business output occurs across the state. This raises prosperity in California and expands the economic base for society as a whole.

Benefits to society also consist of the savings generated by the improved lifestyles of students. Similar to the taxpayer section above, education is statistically correlated with a variety of lifestyle changes that generate social savings. Note that these costs are avoided by the consumers, and are distinct from the costs avoided by taxpayers outlined above. Health savings include avoided medical costs associated with smoking, alcoholism, obesity, drug abuse, and mental disorders. Crime savings include reduced security expenditures and insurance administration, lower victim costs, and reduced criminal justice system expenditures. Unemployment savings include the reduced employer contributions towards unemployment claims. For a list of study references to these statistical benefits, please contact the district for a copy of the main report.

Figure 4 shows the present value of the higher earnings and social savings that will occur in California over the working lifetime of the FY 2013-14 student population at SBCCD. Higher earnings amounts to a present value of \$2.9 billion due to the increased lifetime earnings of students and associated increases in business output. Social savings amount to \$50.2 million, the sum of health, crime, and unemployment savings in California. Altogether, total benefits to society equal \$2.9 billion (in present value terms).

Society invested \$235.6 million in SBCCD educations during the analysis year. This includes all expenditures by SBCCD, all student expenditures, and all student opportunity costs. For every dollar of this investment, society as a whole in California will receive a

FIGURE 4. PRESENT VALUE OF HIGHER EARNINGS AND SOCIAL SAVINGS IN CALIFORNIA

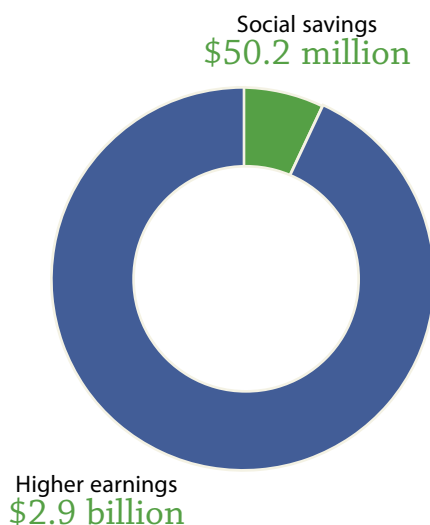


TABLE 3. SUMMARY OF INVESTMENT ANALYSIS RESULTS

STUDENT PERSPECTIVE	
\$550,710	Present value benefits (thousands)
\$156,930	Costs (thousands)
\$393,780	Net present value (thousands)
3.5	Benefit-cost ratio
14.3%	Rate of return

TAXPAYER PERSPECTIVE	
\$240,719	Present value benefits (thousands)
\$73,311	Costs (thousands)
\$167,408	Net present value (thousands)
3.3	Benefit-cost ratio
9.8%	Rate of return

SOCIAL PERSPECTIVE	
\$2,939,249	Present value benefits (thousands)
\$235,634	Costs (thousands)
\$2,703,615	Net present value (thousands)
12.5	Benefit-cost ratio
N/A	Rate of return*

* 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.

cumulative value of \$12.50 in benefits, equal to the \$2.9 billion in benefits divided by the \$235.6 million in costs. These benefits will occur for as long as SBCCD’s FY 2013-14 students remain employed in the state workforce.

SUMMARY OF INVESTMENT ANALYSIS RESULTS

Table 3 presents the results of the investment analysis for all three of SBCCD’s major stakeholder groups—students, taxpayers, and society. As shown, students receive great value for their educational investment. At the same time, the investment made by state and local taxpayers to the district creates a wide range of benefits to society and returns more to government budgets than it costs.

The results of this study demonstrate that SBCCD creates value from multiple perspectives. The district benefits local businesses by increasing consumer spending in the region and supplying a steady flow of qualified, trained workers into the workforce. It enriches the lives of students by raising their lifetime earnings and helping them achieve their individual potential. It benefits state and local taxpayers through increased tax receipts across the state and a reduced demand for government-supported social services. Finally, it 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.



CONCLUSION



ABOUT THE STUDY

Data and assumptions used in the study are based on several sources, including the FY 2013-14 academic and financial reports from the district, industry and employment data from the U.S. Bureau of Labor Statistics and U.S. Census Bureau, outputs of EMSI's Social Accounting Matrix (SAM) 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 investment effectiveness and economic impact. For a full description of the data and approach used in the study, please contact the district for a copy of the technical report.

ABOUT EMSI

Economic Modeling Specialists International, a CareerBuilder company, is a leading provider of economic impact studies and labor market data to educational institutions, workforce planners, and regional developers in the U.S. and internationally. Since 2000, EMSI has completed over 1,200 economic impact studies for educational institutions in four countries. Visit www.economicmodeling.com for more information about EMSI's products and services.