

THE ECONOMIC CONTRIBUTION OF SAN JUAN COLLEGE

State of New Mexico

Executive Summary

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HIGHLIGHTS

- Students enjoy an attractive **14.5%** annual return on their investment of time and money—for every \$1 the student invests in SJC, he or she will receive a cumulative **\$4.39** in higher future earnings over the next 30 years or so (after discounting).
- Taxpayers see a real money “book” return of **8.4%** on their annual investments in SJC and recover all investments in **15.1** years.
- The State of New Mexico benefits from improved health and reduced welfare, unemployment, and crime, saving the public some **\$1.6 million** per year each year that the students are in the workforce.
- The present-day economy in San Juan County owes roughly **\$101.4 million** of its regional income to SJC operations and past student productivity effects. This figure amounts to roughly **3.3%** of a typical year’s regional economic growth.

INTRODUCTION

How do the San Juan County Service Area economy and the State of New Mexico benefit from the presence of San Juan College (SJC)?

An obvious question often asked, but rarely answered with more than anecdotes. In this study, CCbenefits, Inc. applied a comprehensive economic model they developed with funding from the Association for Community College Trustees (ACCT). The model captures and quantifies the economic benefits of community and technical colleges, and translates these into common sense benefit/cost and investment terms.

The study tracks four types of benefits:

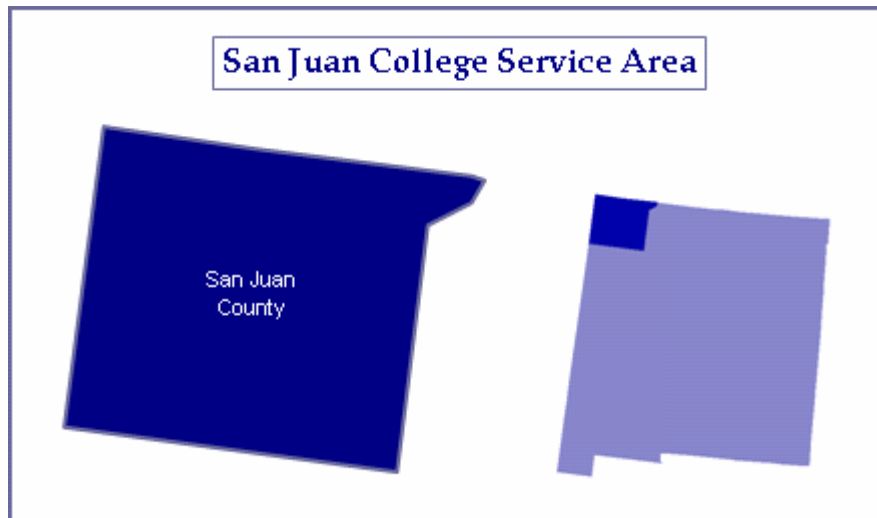
1. **Regional Economic Benefits** – Local job and income formation;
2. **Student Perspective** – Higher earnings captured by exiting students;
3. **Taxpayer Perspective** – A collection of social benefits and avoided costs;
4. **Investment Analysis** – The return to taxpayers for their college support.

The economic impact model has been subjected to peer review and field-tested on over 500 different community and technical colleges throughout 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. The model also provides an analytical alternative from the all-too-common “advocacy analyses” that inflate benefits, understate costs, and thus discredit the process of higher education impact assessment.



THE RESULTS

For a more in-depth discussion of the results, the reader is encouraged to consult the Main Report, “The Economic Contribution of San Juan College,” containing the detailed assumptions, their context, and the computation procedures.



Each year students leave SJC and join or rejoin the local workforce. Their added skills translate to higher income and a more robust San Juan County Service Area economy. Based on current enrollment, turnover, and the growth of instruction over time, the local region workforce embodies an

➤ Regional Economic Benefits

SJC affects the local economy in two ways:

1) through its local purchases, including the wages paid to its faculty and staff, and 2) through a human capital effect stemming from an increase in the skill-base of the local workforce. The effects of SJC break down as follows:

- *SJC Operations and Capital Spending*

SJC creates regional income through the earnings of its faculty and staff, as well as through its own operating and capital expenditures. Adjusting for taxes and other monies withdrawn from the local economy in support of SJC, we can say that the present-day San Juan County Service Area economy owes roughly \$14.6 million in labor and non-labor income to SJC operations and capital spending.

- *Higher Regional Income Due to Past Instruction*

estimated 728,100 credits of past and present instruction. The accumulated contribution of past and present SJC instruction adds some \$86.8 million in regional income to the current San Juan County Service Area.

In sum, SJC contributes a total of \$101.4 million in regional labor and non-labor income to the current San Juan County Service Area economy. This is the approximate equivalent of 2,000 jobs.

➤ Student Perspective

The student's perspective on the benefits of higher education is the most obvious: he or she sacrifices current earnings (as well as money to pay for tuition) in return for a lifetime of higher earnings. For every credit completed, SJC students will, on average, earn \$73 more per year each year they are in the workforce. Alternatively, for every full-time year they attend they will earn an additional \$2,189 per year. In the aggregate (all exiting students), the higher earnings amount to some \$9.8 million per year for each year they remain in the workforce.

From an investment standpoint, SJC students will enjoy a 14.5% rate of return on their investments of time and money.

This compares favorably with the returns on other investments, e.g., the long-term return on U.S. stocks and bonds. The corresponding benefit/cost ratio is 4.4, i.e., for every \$1 the student invests in SJC education, he or she will receive a cumulative of \$4.39 in higher future earnings over the next 30 years or so. Note that this is a *real* return and accounts for any discounting that may occur during the entire thirty-year period. The payback period (the time needed to recover all costs) is 9.9 years.

➤ **Taxpayer Perspective**

State and local government spent \$40.0 million in support of SJC 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 the 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 \$12 per credit per year, counted as an indirect benefit of SJC education. **When aggregated across all exiting students, the State of New Mexico will benefit from \$1.6 million worth of avoided costs per year, each year that the students are in the workforce.** These

savings, commonly known as externalities, are broken down as follows:

- *Improved Health*

Employers in the State of New Mexico will see health-related absenteeism decline by 2,200 days per year, with a corresponding annual dollar savings of approximately \$162,000. The state will benefit from the health-related savings of roughly 170 fewer smokers and 30 fewer alcohol abusers. The corresponding dollar savings are \$507,000 and \$245,000 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 New Mexico, about 30 fewer individuals will be incarcerated per year, resulting in annual savings of \$232,000 (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 \$74,000 per year. Finally, that people are employed rather than incarcerated adds \$85,000 of earnings per year to the economy.

- *Reduced Welfare/Unemployment*

There will be around 210 fewer people on welfare, and 60 fewer drawing unemployment benefits per year, saving some \$191,000 and \$57,000 per year, respectively.

➤ Investment Analysis

The return on a year's worth of state and local government investment in SJC is obtained by projecting the associated educational benefits into the future, discounting them back to the present, and weighing these against the \$40.0 million state and local taxpayers spent during the analysis year to support the college. The analysis is based on the portion of SJC operations that is wholly dependent on state and local government support. Two investment perspectives are possible, one broad and one narrow.

- *Broad Perspective*

Taxpayers expect their annual investment in SJC 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 SJC provides a benefit/cost ratio of 8, i.e., every dollar of state or local tax money invested in SJC today returns a cumulative of \$8 over the next 30 years. As above, this is a *real* return, accounting for any discounting that may occur during the thirty-year period. 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 the 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 4.0% discount rate used in this analysis) would be a favorable outcome, certainly one that justifies continued taxpayer support of the college. For SJC, the narrow perspective results greatly exceed the minimum expectations.

The results indicate strong and positive returns: a rate of return of 8.4%, a benefit/cost ratio of 2.0 (every dollar of state or local tax money invested in SJC today returns \$2.04), and a short payback period of only 15.1 years.

CONCLUSION

The results of this study demonstrate that SJC is a sound investment from multiple perspectives. The college 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 Impact	
Regional Economic Growth			
College contribution to regional income (labor and non-labor)			\$14,618,000
Student contribution to regional income (labor and non-labor)			\$86,763,000
Job equivalent			2,000
Annual Benefits			
<i>Higher earnings</i>			
Aggregate (all students)			\$9,793,000
Per Credit			\$73
Per full-year equivalent student			\$2,189
<i>Social savings</i>			
Aggregate (all students)			\$1,553,000
Per Credit			\$12
Per full-year equivalent student			\$347
Investment Analysis	RR	B/C Ratio	Payback (Years)
Students	14.5%	4.4	9.9
Taxpayers: Broad Perspective	NA	8.3	NA
Taxpayers: Narrow Perspective	8.4%	2.0	15.1

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 (106 pp) lays out the detailed assumptions and analysis. Another report (11 pp) provides detailed tabular results by gender, ethnicity, and entry levels of education, and a one-page fact sheet contains highlights of the study results at a glance. The study also includes a one-page write-up in layman's terms about the differences between the broad and narrow taxpayer perspectives. Lastly, a PowerPoint presentation is developed showing the main results for college presidents to adapt and use in speeches before state legislators and other education stakeholders.

FACT SHEET: ECONOMIC IMPACT OF SAN JUAN COLLEGE

What role does San Juan College (SJC) play in the local economy? The results of this study demonstrate that SJC is a sound investment from multiple perspectives. Students benefit from improved lifestyles and increased earnings. Taxpayers benefit from an enlarged economy and lower social costs. And the community as a whole benefits from increased job and investment opportunities, higher business revenues, greater availability of public funds, and an eased tax burden.

SJC stimulates the state and local economy

- The current San Juan County Service Area economy owes roughly **\$14.6 million** in regional income to SJC operations and capital spending.
- SJC activities encourage new business, assist existing business, and create long-term economic growth. The college enhances worker skills and provides customized training to local business and industry. It is estimated that the present-day San Juan County Service Area workforce currently embodies over **728.1 thousand** credit and non-credit hours of past and present SJC training.
- SJC skills embodied in the present-day workforce increase regional income in the San Juan County Service Area economy where the former students are employed by **\$76.3 million**. Associated multiplier effects (sometimes called indirect effects) increase income by another **\$10.4 million**.
- Altogether, the present-day economy in the San Juan County Service Area owes roughly **\$101.4 million** of its current labor and non-labor income to the past and present efforts of SJC. Clearly it is not inaccurate to describe SJC as an engine of economic growth.

The SJC regional economy is measurably stronger.

SJC leverages taxpayer dollars

- For every credit earned by SJC students, the state and local community will see social savings amounting to some **\$12** per year, including savings associated with improved health, lower crime costs, and reduced welfare and unemployment.
- When aggregated across all exiting students, the State of New Mexico will benefit from **\$1.6 million** worth of avoided costs each year over the next 39-year period.
- Students benefit from higher earnings, thereby expanding the tax base and reducing the tax burden on state and local taxpayers. When aggregated together, students generate about **\$9.8 million** annually in higher earnings due to their SJC education.

SJC generates a return on government investment

- State and local government allocated around **\$40.0 million** in support of SJC in fiscal year 2005. For every dollar appropriated by state and local government, taxpayers will see a cumulative return of **\$2.04** over the next 39 years or so, or as long as the students are in the workforce.
- State and local government support for SJC will be fully recovered in **15.1** years, in the form of higher tax receipts and avoided social costs.

SJC returns far more to taxpayers than it costs.

- State and local government will see a rate of return of **8.4%** on their support for SJC. This return compares very favorably with private sector rates of return on similar long-term investments.

SJC increases students' earning potential

- A total of 20,594 credit and non-credit students attended the college in academic year 2004-2005. As many as **70%** of these students stay in the region initially after they leave the college and contribute to the local economy.
- Studies demonstrate that education increases lifetime earnings. The average annual earnings of a student with a one-year certificate are **\$21,790**, or **81%** more than someone without a high school diploma or GED, and **16%** more than a student with a high school diploma. The average earnings of someone with an Associate Degree are **\$25,545**, or **112%** more than someone without a high school diploma or GED, and **36%** more than a student with a high school diploma or GED.
- SJC students will see their annual income increase, on average, by about **\$73** per year for every credit completed at SJC during the analysis year.
- Over the next 39 years in the workforce, the average SJC student's discounted lifetime earnings (i.e., future values expressed in present value terms) will increase **\$4.39** for every education dollar invested (in the form of tuition, fees, books, and foregone earnings from employment).
- Students enjoy an attractive **14.5%** rate of return on their SJC educational investment, and recover all costs (including wages foregone while attending) in **9.9** years.

Past SJC students are measurably better off.

TAXPAYER PERSPECTIVES: SAN JUAN COLLEGE

State and local taxpayers earn 8.4% rate of return on their investment in San Juan College.

The verdict is in: San Juan College adds more money to the state treasury than it takes out. Not only does the college pull its own weight, but it also effectively subsidizes other sectors funded by the taxpayers. Absent SJC, taxes would actually have to be raised in order to maintain services in all other sectors at their current levels.

The return on investment is considered from two taxpayer perspectives: broad and narrow. To better appreciate both of these, we develop them more fully below.

Broad Investment Perspective

In the broad perspective we add up all benefits regardless of recipient and compare the total to the investment made in a benefit/cost ratio. If the ratio is less than one, the investment is not worthwhile; if it is greater than one, the investment can be considered sound.

Some examples: a transportation authority justifies a new road by showing that the savings in travel time and vehicle expenses accrued by thousands of drivers exceed the project's cost. Public parks are justified by showing that recreation, scenic and other values accruing to park users exceed the public outlay for park infrastructure, operation, and the net value of extractive resources not used. All benefits are counted, not just those that accrue back to state or local government. This is the hallmark of the broad investment perspective.

Applying this perspective to SJC, the benefits accrue to different publics. The students accrue the higher earnings as long as they are in the workforce, whereas the public at large accrue the external social benefits (i.e., reduced crime, welfare and unemployment, improved health, and less absenteeism from work). All of these are tallied up and compared to the investments made by state and local government, or the taxpayers. A broad perspective benefit/cost ratio greater than 1.0 is a minimal indicator of a worthwhile public investment.

San Juan College's benefit/cost ratio thus counted is 8. This means that, for every dollar invested, the public at large will receive a cumulative of \$8 back over the next 39-year period, or as long as the students are in the workforce.

Narrow Investment Perspective

The narrow investment perspective counts only benefits that can be entered into the books of state and local governments. For example, a portion of higher student earnings will be captured by state and local governments in the form of added tax receipts. Additionally, because state and local governments bear part of the cost of crime, their budgets benefit from education-induced crime reductions. The same holds in varying degrees for the other assorted benefits of an educated populace. The bottom line: while state and local governments spend money in support of San Juan College, they receive benefits in the form of increased tax receipts and an assortment of reduced expenditures or avoided social costs.

Worthwhile public projects routinely generate negative narrow perspective returns. Generally, the role of government is to provide services that the public wants, but the business sector finds unprofitable. Considerable funds are spent on public parks, for example, yet except for entry fees and some concessionaire or special events receipts, no monies directly return to the state or local taxpayers. From a narrow investment perspective, taxpayer returns are negative, and the park is justified by the benefits tracked under the broad perspective.

The important finding of this analysis is that the results are not only strong from the broad perspective but, unlike most government endeavors, the taxpayer investments generate strong results from the narrow perspective as well. Economists generally assume a 4.0% discount rate in analyzing government investments, assuming that governments can obtain unsecured loans at a rate of 4.0% or receive a return of 4.0% on any excess funds were they to be invested. **Since SJC's narrow rate of return of 8.4% is greater than 4.0%, we conclude that the state government actually makes money on the investment.** By funding the college, therefore, other beneficiaries of state funding are actually subsidized through the revenues generated by the college.

