



THE ECONOMIC CONTRIBUTION OF LANE COMMUNITY COLLEGE

State of Oregon

Executive Summary

June 22, 2006

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HIGHLIGHTS

- Students enjoy an attractive **17%** annual return on their investment of time and money.
- For every \$1 the students invest in LCC, they will receive a cumulative **\$4.60** in higher future earnings over the course of their working careers (after discounting).
- Taxpayers see a real money “book” return of **15%** on their annual investments in LCC.
- The State of Oregon benefits from improved health and reduced welfare, unemployment, and crime, saving the public some **\$4.1 million** per year each year that the students are in the workforce.
- The Lane County economy receives roughly **\$826.5 million** in regional income due to LCC operations and past student productivity effects. This figure amounts to **10%** of a typical year’s economic growth.

INTRODUCTION

How do the Lane County economy and the State of Oregon benefit from the presence of Lane Community College (LCC)?

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** – Formation of regional labor and non-labor income;
2. **Student Perspective** – Higher earnings captured by students;
3. **Taxpayer Perspective** – A collection of social benefits and avoided costs;
4. **Investment Analysis** – The return to taxpayers for their college support.

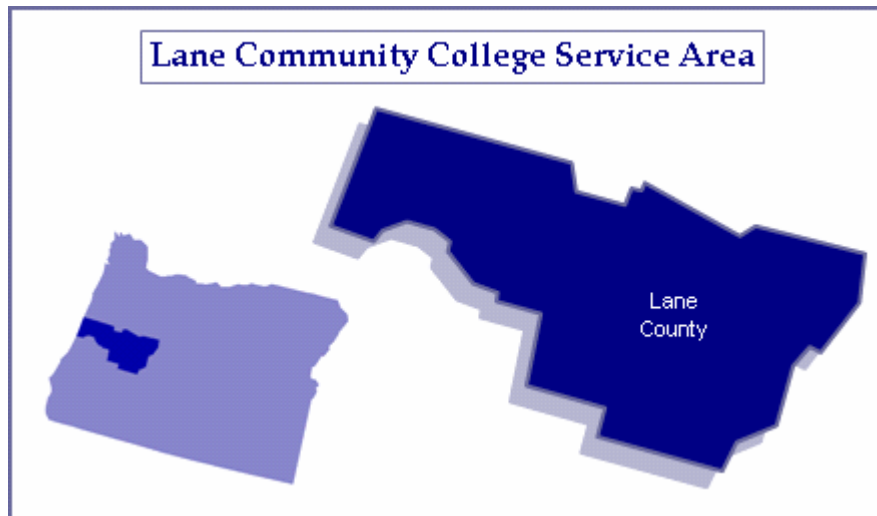
The economic impact model has been subjected to peer review and field-tested on over 500 different community and technical colleges throughout the U.S. and Canada. Model results are based on solid economic theory, carefully drawn functional relationships, and a wealth of national and local education-related 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 Lane Community College,” containing the detailed assumptions, their context, and the computation procedures.



robust Lane County economy. Based on current enrollment, turnover, and the growth of instruction over time, the local region workforce embodies an estimated 8.4 million credits of past and present instruction. The accumulated contribution of past and present LCC instruction adds some

➤ Regional Economic Benefits

LCC 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 LCC break down as follows:

- *LCC Operations Spending*

LCC 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 LCC, it is estimated that the present-day Lane County economy owes roughly \$59.6 million in labor and non-labor income to LCC operations and capital spending.

- *Past Student Productivity*

Each year students leave LCC and join or rejoin the local workforce. Their added skills translate to higher income and a more

\$767.0 million in regional income to the current economy of Lane County.

In sum, LCC contributes a total of \$826.5 million in regional labor and non-labor income to the current Lane County economy.

➤ 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, LCC students will, on average, earn \$69 more per year each year they are in the workforce. Alternatively, for every full-time year they attend they will earn an additional \$3,108 per year. In the aggregate (all exiting students), the higher earnings amount to some \$34.6 million per year for each year they remain in the workforce.

From an investment standpoint, LCC students will enjoy a 17% 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 4.6, i.e., for every \$1 the student invests in LCC education, he or she will receive a cumulative of \$4.60 in higher future earnings over their working careers. This is a *real* return and accounts for any discounting that may occur during the entire period. The time needed to recover all costs is 8 years.

➤ Taxpayer Perspective

State and local government spent \$47.8 million in support of LCC 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 \$8 per credit per year, counted as an indirect benefit of LCC education. **When aggregated across all exiting students, the State of Oregon will benefit from \$4.1 million worth of avoided costs per year, each year that the students are in the workforce.** Note that this is an annual figure and does not account for out-of-state attrition that occurs over time. Attrition is applied in the investment analysis, discussed in greater detail in the next section.

The social savings, commonly known as externalities, break down as follows:

- *Improved Health*

Employers in the State of Oregon will see health-related absenteeism decline by 5,800 days per year, with a corresponding annual dollar savings of approximately \$604,000. The state will benefit from the health-related savings of roughly 430 fewer smokers and 110 fewer alcohol abusers. The corresponding dollar savings are \$1.3 million and \$760,000 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 Oregon, about 70 fewer individuals will be incarcerated per year, resulting in annual savings of \$495,000 (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 \$159,000 per year. Finally, that people are employed rather than incarcerated adds \$270,000 of earnings per year to the economy.

- *Reduced Welfare/Unemployment*

There will be around 280 fewer people on welfare, and 110 fewer drawing unemployment benefits per year, saving some \$390,000 and \$132,000 per year, respectively.

➤ Investment Analysis

The return on a year's worth of state and local government investment in LCC is obtained by projecting the associated educational benefits into the future, discounting them back to the present, and weighing these against the \$47.8 million state and local taxpayers spent during the analysis year to support the college. The analysis is based on the portion of LCC 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 LCC 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 LCC provides a benefit/cost ratio of 25, i.e., every dollar of state or local tax money invested in LCC today returns a cumulative of \$25 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 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% discount rate used in this analysis) would be a favorable outcome, certainly one that justifies continued taxpayer support of the college. For LCC, the narrow perspective results greatly exceed the minimum expectations.

The results indicate strong and positive returns: a rate of return of 15%, and a benefit/cost ratio of 3.6 (every dollar of state or local tax money invested in LCC today returns \$3.60).

CONCLUSION

The results of this study demonstrate that LCC 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				
Annual college contribution to regional income (labor and non-labor)		\$59,561,000		
Annual student contribution to regional income (labor and non-labor)		\$766,985,000		
TOTAL		\$826,546,000		
Annual Benefits				
<i>Higher earnings</i>				
Aggregate (all students)		\$34,633,000		
Per Credit		\$69		
Per full-year equivalent student		\$3,108		
<i>Social savings</i>				
Aggregate (all students)		\$4,112,000		
Per Credit		\$8		
Per full-year equivalent student		\$369		
Investment Analysis		RR	B/C Ratio	Payback (Years)
Students		17.3%	4.6	8.1
Taxpayers: Broad Perspective		NA	24.6	NA
Taxpayers: Narrow Perspective		14.8%	3.6	9.1

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 lays out the detailed assumptions and analysis. Another report provides detailed tabular results by gender, ethnicity, and entry levels of education, and a fact sheet contains highlights of the study results at a glance. The study also includes a 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 LANE COMMUNITY COLLEGE

What role does Lane Community College (LCC) play in the local economy? The results of this study demonstrate that LCC 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.

LCC stimulates the state and local economy

- The Lane County economy receives roughly **\$59.6 million in regional income** annually due to LCC operations and capital spending.
- LCC 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 Lane County workforce embodies around **8.4 million credit and non-credit hours** of past and present LCC training.
- LCC skills embodied in the workforce of Lane County where the former students are employed **increase regional income by \$642.9 million**. Associated indirect effects increase income by **another \$124.1 million**.
- Altogether, the Lane County economy annually receives roughly **\$826.5 million in income** due to the past and present efforts of LCC. Clearly it is accurate to describe LCC as an engine of economic growth.

The regional economy is \$826.5 million stronger due to the actions of LCC.

LCC leverages taxpayer dollars

- The state and local community will see **avoided social costs amounting to \$8 per year for every credit earned** by LCC students, including savings associated with improved health, reduced crime, and fewer welfare and unemployment claims.
- This translates to **\$4.1 million worth of social savings** to the State of Oregon each year as long as students are in the workforce.
- Students benefit from higher earnings, thereby expanding the tax base and reducing the tax burden on state and local taxpayers. When aggregated together, LCC students generate about **\$34.6 million annually in higher earnings** due to their LCC education.

LCC generates a return on government investment

- State and local government allocated around **\$47.8 million in support of LCC** in fiscal year 2005.
- For every dollar appropriated by state and local government, taxpayers will see a **cumulative return of \$3.60** over the course of the students' working career (in the form of higher tax receipts and avoided social costs).

LCC returns \$3.60 for every dollar of taxpayer financial support.

- State and local government will see a **rate of return of 15%** on their support for LCC, which compares very favorably with private sector rates of return on similar long-term investments.

LCC increases students' earning potential

- A total of **29,930 credit and non-credit students** attended the college in academic year 2004-2005. As many as **84% 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 \$30,338**, or 84% 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 a student with an Associate Degree are \$35,718**, or 117% more than someone without a high school diploma or GED, and 37% more than a student with a high school diploma or GED.
- LCC students will see their annual income increase, on average, by about **\$69 per year for every credit completed** at LCC during the analysis year.
- Throughout his or her working career, the average LCC student's discounted lifetime earnings (i.e., future values expressed in present value terms) will increase **\$4.60 for every education dollar invested** (in the form of tuition, fees, books, and foregone earnings from employment).
- Students enjoy an attractive **17% annual rate of return** on their LCC educational investment, and recover all costs (including wages foregone while attending) in **8 years**.

Students see their annual income increase by \$69 per year for every credit completed at LCC.

TAXPAYER PERSPECTIVES: LANE COMMUNITY COLLEGE

State and local taxpayers earn 15% rate of return on their investment in Lane Community College.

The verdict is in: Lane Community 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 LCC, 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 LCC, 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.

Lane Community College's benefit/cost ratio thus counted is 25. In other words, the cumulative added value attached to each dollar invested will have a present value of \$25 by the end of the students' working career.

Narrow Investment Perspective

The narrow investment perspective counts only benefits that can be entered into the books of state and local government. For example, a portion of higher student earnings will be captured by state and local government in the form of added tax receipts. Additionally, because state and local government bears part of the cost of crime, its budget benefits 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 government spends money in support of Lane Community College, it receives 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 LCC's narrow rate of return of 15% is greater than 4%, 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.

