



Executive Summary

The **Economic Contribution** *of*

Washington Community and Technical Colleges
State of Washington



Economic Growth Analysis
Investment Analysis

emsi

January 2011



Socioeconomic Impact Study

STUDY HIGHLIGHTS

ECONOMIC GROWTH ANALYSIS

- The net added income generated by the operations of Washington's community and technical colleges (**\$746.6 million**) and the spending of international students (**\$75.9 million**) contributes a total of **\$822.4 million** in income to the Washington economy each year.
- The accumulated credits achieved by former students of Washington's community and technical colleges over the past 30 years translated to **\$10.2 billion** in added state income in 2009-10 due to the higher earnings of students and increased output of businesses.
- Altogether, the average annual added income due to the activities of Washington's community and technical colleges and their former students equals **\$11 billion**. This represents approximately **3.8%** of Washington's total economy.

INVESTMENT ANALYSIS

- For every dollar students invest in Washington's community and technical colleges, they receive a cumulative **\$5.90** in higher future income (discounted) over the course of their working careers.
- Washington benefits from improved health and reduced welfare, unemployment, and crime, saving the public some **\$50.7 million** per year.
- Taxpayers see a rate of return of **6.4%** on their investment in Washington's community and technical colleges.

Executive Summary

INTRODUCTION

How does the economy of the state of Washington benefit from the presence of Washington's community and technical colleges?

In this study, EMSI applies a comprehensive 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 includes two major analyses:

1. **Economic Growth Analysis:** Measures added income in the state due to college operations, student spending, and the accumulated skills of past and present students still in the workforce.
2. **Investment Analysis:** Treats education funding as an investment, calculating returns and comparing them to costs, from the perspectives of students, taxpayers, and society as a whole.

The economic impact model has been field-tested to generate more than 900 studies for community and technical colleges in the US, Canada, the UK, and Australia. A link to the full documentation of the study can be found at www.sbctc.edu.

A note of importance: To ensure that the results are accurate and that the methodology conforms to best practices, the impact model is continuously updated. Variances in the results from the previous study that EMSI conducted for SBCTC in 2005 reflect a combination of changes to SBCTC's data, updates and methodological improvements to the model, and economic shifts in the state. For more information, please see the Preface in the Main Report.

THE RESULTS

Economic Growth Analysis

Washington's community and technical colleges affect the state economy in three ways: (1) through their in-state purchases, including wages paid to faculty and staff; (2) through the spending of international students; and (3) through the increase in the skill base of the state workforce. These effects break down as follows:

College Operations Effect

Washington's community and technical colleges create income through the earnings of their faculty and staff, as well as through their own operating and capital expenditures. Adjusting for taxes and other monies withdrawn from the state economy in support of Washington's community and technical colleges, it is estimated that the state economy receives a net of \$746.6 million in added labor and non-labor income due to the operations of the colleges each year.

Student Spending Effect

International students who take up residence in the state while attending college spend money for room and board, transportation, entertainment, and other miscellaneous personal expenses. These expenditures create jobs and incomes for businesses. The spending of international students attending Washington's community and technical colleges generates approximately \$75.9 million in added income in the Washington economy each year.

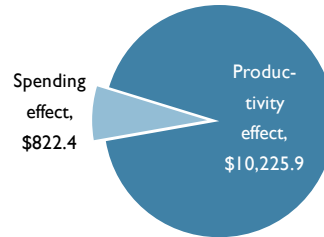
Student Productivity Effect

Every year students leave Washington's community and technical colleges and join or rejoin the state workforce. Their added skills translate to higher income and a more robust state economy. Based on the historical enrollment and credit production at Washington's community and technical colleges over the past 30-year period, it is estimated that the accumulated

ECONOMIC IMPACT ANALYSIS AT A GLANCE

Added Income	
College operations effect	\$746,568,000
Student spending effect	\$75,869,000
Total spending effect	\$822,438,000
Student productivity effect	\$10,225,902,000
GRAND TOTAL	\$11,048,339,000

Total Added Income in Washington (\$ Millions)



contribution of instruction received by former students at the colleges (both completers and non-completers) annually adds some \$10.2 billion in income to the Washington economy.

Total Effect

Altogether, the average annual added income due to the activities of Washington’s community and technical colleges and their former students equals \$11 billion. This represents approximately 3.8% of Washington’s total economy.

Investment Analysis

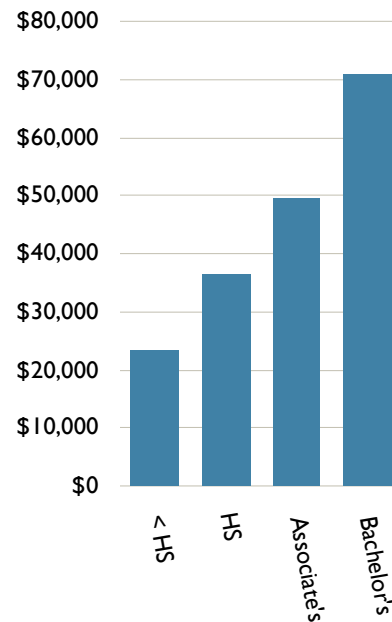
Student Perspective

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 income. Compared to someone with a high school diploma, associate’s degree graduates in Washington earn \$12,900 more per year, on average, over the course of a working lifetime (undiscounted).

From an investment standpoint, students of Washington’s community and technical colleges enjoy a 20.8% rate of return on their investments of time and money. This compares favorably with returns on other investments, e.g., long-term return on stocks and bonds.

The corresponding benefit/cost ratio is 5.9, i.e., for every dollar students invest in education, they receive a cumulative of \$5.90 in higher future income over their working careers. This is a real return that accounts for any discounting that occurs during the entire period. The payback period is 7.1 years.

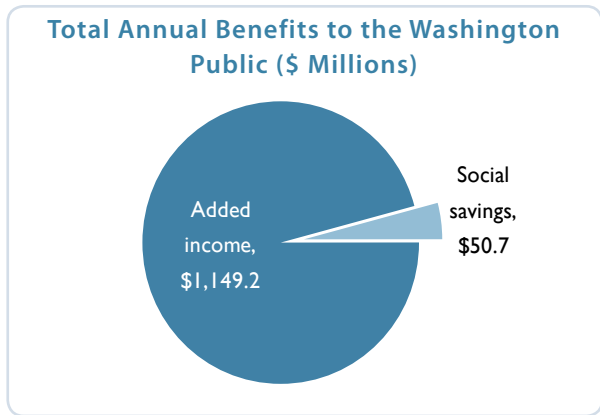
Earnings by Education Level in Washington



Social Perspective

From the perspective of society as a whole, the benefits of education accrue to different publics. For example, students from Washington’s community and technical colleges expand the state’s economic base through their higher incomes, while the businesses that employ them also become more productive through the students’ added skills. These benefits, together with the associated ripple effects, contribute an estimated \$1149.2 million in taxable income to the Washington economy each year.

As they achieve higher levels of education, students of Washington’s community and technical colleges are also less likely to smoke or abuse alcohol, draw welfare or unemployment benefits, or commit crimes. This translates into associated dollar savings (i.e., avoided costs) to the public equal to approximately \$50.7 million annually. These are benefits that are incidental to the operations of Washington’s community and technical colleges and accrue for years into the future, for as long as students remain active in the workforce.



To compare benefits to costs, we project benefits into the future, discount them back to the present, and weigh them against the \$1.1 billion that state taxpayers spent in FY 2009-10 to support the colleges. Following this procedure, it is estimated that Washington’s community and technical colleges provide a benefit/cost ratio of 18.7, i.e. every dollar of state tax money invested in the colleges today yields a cumulative of

\$18.70 in benefits that accrue to all Washington residents, in terms of added taxable income and avoided social costs.

Taxpayer Perspective

Under the taxpayer perspective, only benefits that accrue to state and local governments are counted, namely, increased tax collections and reduced government expenditures. For example, in place of increased income, the taxpayer 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 taxpayer perspective includes only those that translate to actual reductions in state and local government expenditures.

Note here that government often undertakes activities wanted by the public, but which may be unprofitable in the marketplace. This means that positive economic returns are generally not expected from government investments. From the taxpayer perspective, therefore, even a small positive return (a benefit/cost ratio equal to or greater than 1, or a rate of return equal to or greater than the 3% discount rate used in the taxpayer investment analysis) would be a favorable outcome.

For Washington’s community and technical colleges, the results indicate positive returns: a rate of return of 6.4% and a benefit/cost ratio of 1.7 (every dollar of state tax money invested in Washington’s community and technical colleges today returns \$1.70).

INVESTMENT ANALYSIS AT A GLANCE			
Stakeholder	Rate of Return	Benefit/Cost	Payback (Years)
Student perspective	20.8%	5.9	7.1
Social perspective	NA	18.7	NA
Taxpayer perspective	6.4%	1.7	16.5

CONCLUSION

The results of this study demonstrate that Washington’s community and technical colleges are a sound investment from multiple perspectives. The colleges enrich the lives of students and increase their lifetime incomes. They benefit taxpayers by generating

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



ABOUT THE STUDY

This report summarizes the results from “The Economic Contributions of Washington Community and Technical Colleges” detailing the role that the colleges play in promoting economic development, enhancing students’ careers, and improving quality of life. Data sources include, but are not limited to, 2009-10 academic and financial reports from SBCTC, industry and employment data from the U.S. Bureau of Labor Statistics, earnings and demographic data from the U.S. Census Bureau, and a variety of studies and surveys relating education to social behavior.

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