



CapilanoCollege

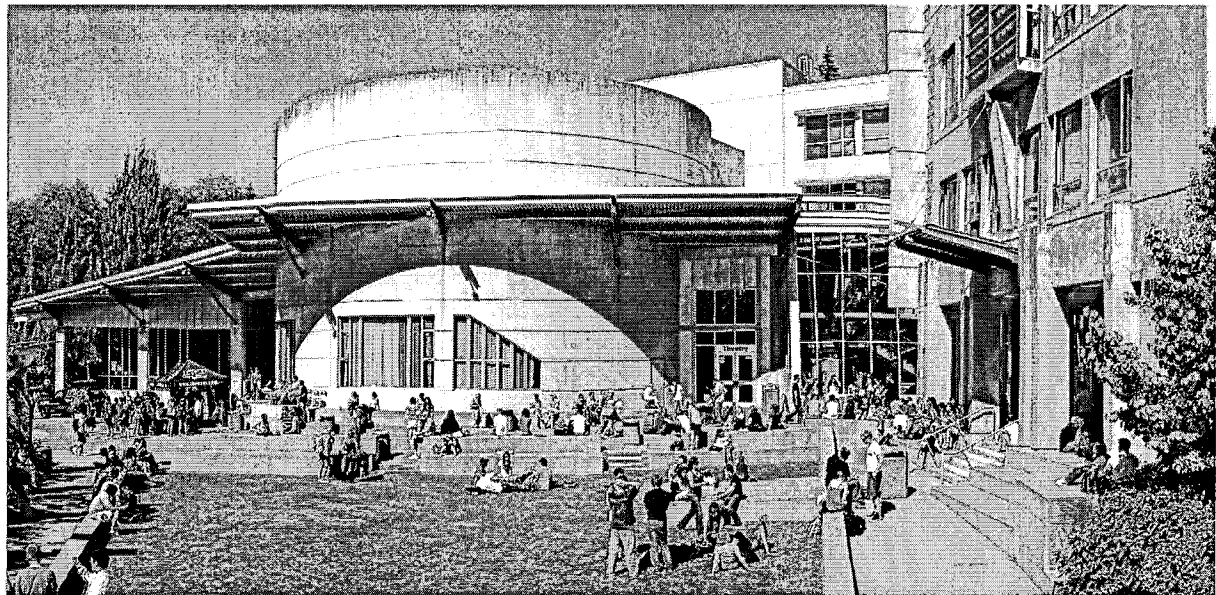
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ECONOMIC CONTRIBUTION OF CAPILANO COLLEGE

Analysis of Investment Effectiveness and Economic Growth

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ECONOMIC IMPACT OF CAPILANO COLLEGE

What role does Capilano College play in the provincial and local economy? The results of this study demonstrate that Capilano 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, and an eased tax burden.



Capilano stimulates provincial and local economy

- The Capilano Service Area economy receives roughly \$48.0 million in regional income annually due to Capilano operations and capital spending.
- About 51% of Capilano's students come from outside the region, bringing with them monies that would not have otherwise entered the local economy. The expenditures of Capilano's out-of-region students for books and supplies, room and board, transportation, or other personal expenses generate roughly **\$10.6 million in regional income in the Capilano Service Area.**
- Capilano 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 Capilano Service Area workforce embodies around **1.7 million credit hour equivalents (CHEs)** of past and present Capilano training.
- College skills embodied in the workforce of the Capilano Service Area where past and present students are employed yield a cumulative of **\$392.2 million in added regional income.**
- Altogether, the Capilano Service Area economy annually receives roughly **\$450.8 million in income** due to the past and present efforts of Capilano. Clearly it is accurate to describe the college as an engine of economic growth.

Capilano leverages taxpayer dollars

- The provincial and local community will see **avoided social costs amounting to \$9 per year for every credit earned** by Capilano students, including savings associated with improved health, reduced crime, and fewer welfare and unemployment claims.
- This translates to **\$1.7 million worth of social savings** to the Province of British Columbia 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 provincial and local taxpayers. When aggregated together, students generate about **\$25.7 million annually in higher earnings** due to their Capilano education.

Capilano generates return on investment

- Provincial and local government allocated around **\$39.5 million in support of Capilano** in fiscal year 2006.
- For every dollar appropriated by provincial and local government, taxpayers will see a **cumulative return of \$4.90** over the course of the students' working career (in the form of higher tax receipts and avoided social costs).

█ **Capilano returns \$4.90 for every dollar of taxpayer financial support.**

- Provincial and local government will see a **rate of return of 16%** on their support for Capilano, which compares very favorably with private sector rates of return on similar long-term investments.

Capilano increases students' earning potential

- A total of **13,438 credit and non-credit students** attended Capilano in academic year 2005-2006. As many as **48% of these students stay in the region** initially after they leave 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 \$47,400**, or 35% more than someone without a high school diploma or GED, and 13% more than a student with a high school diploma. **The average earnings of a student with a diploma are \$54,100**, or 54% more than someone without a high school diploma or GED, and 29% more than a student with a high school diploma or GED.
- Students will see their annual income increase, on average, by about **\$136 per year for every credit completed** at Capilano during the analysis year.

█ **Students see their annual income increase by \$136 per year for every credit completed at Capilano.**

- Throughout his or her working career, the average Capilano student's discounted lifetime earnings (i.e., future values expressed in present value terms) will increase **\$3.80 for every education dollar invested** (in the form of tuition, fees, books, and foregone earnings from employment).
- Students enjoy an attractive **13% annual rate of return** on their Capilano educational investment, and recover all costs (including wages foregone while attending) in **11 years.**



TAXPAYER PERSPECTIVES: CAPILANO COLLEGE

Provincial and local taxpayers earn 15.5% rate of return on their investment in Capilano College.

The verdict is in: Capilano College adds more money to the provincial 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 Capilano, 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. These are developed more fully below.

Broad Investment Perspective

In the broad perspective all benefits are added together regardless of recipient and compared to the investment made in the form of 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 savings in travel time and vehicle expenses accrued to 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 return to provincial and local government. This is the hallmark of the broad investment perspective.

Applying this perspective to Capilano, the impacts of the college benefit different publics, whether students, businesses, or society as a whole. For example, students benefit from higher earnings as long as they are in the workforce, while the public at large benefits from an expanded economy and an assortment of external social benefits (e.g., reduced crime, fewer welfare and unemployment claims, and improved health). All of these are tallied up and compared to the investments made by provincial 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.

Capilano College's benefit/cost ratio thus counted is 24. In other words, the cumulative added value attached to each dollar invested will have a present value of \$24 by the end of the students' working career.

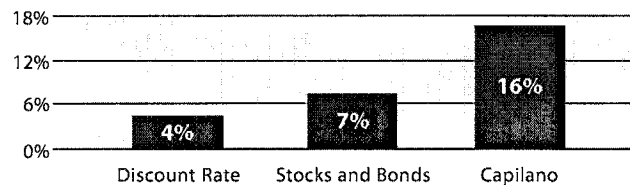
Narrow Investment Perspective

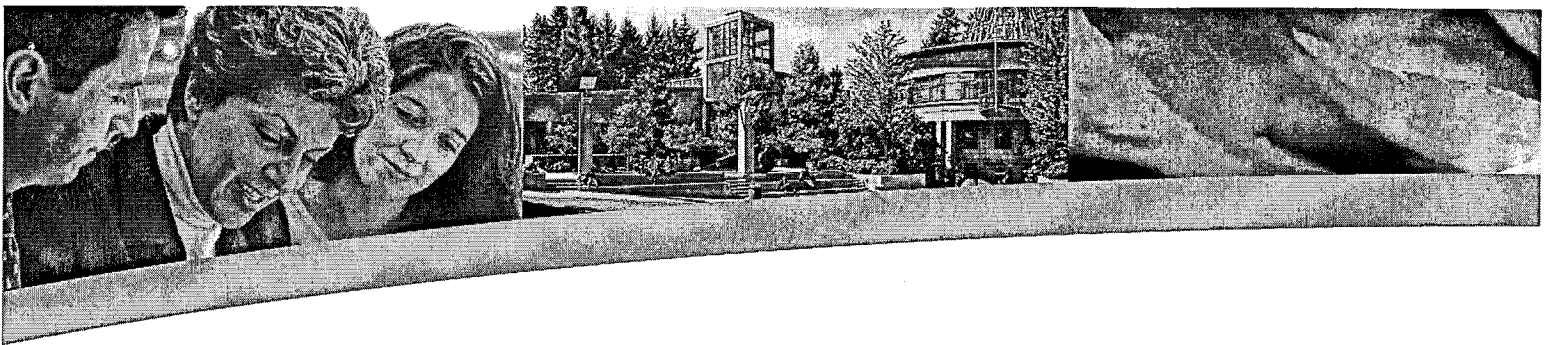
The narrow investment perspective counts only benefits that can be entered into the books of provincial and local government. For example, a portion of higher student earnings will be captured by provincial and local government in the form of added tax receipts. Additionally, because provincial and local 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 provincial and local government invests money in Capilano College, it receives benefits in the form of increased revenue and an assortment of reduced expenditures or avoided social costs.

Generally, the role of government is to provide services that the public wants or needs, but in many cases these projects generate returns that the business sector considers unprofitable. Taxpayer dollars are spent on public parks, for example, yet except for entry fees and some concessionaire or special events receipts, no monies directly return to provincial and 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 Capilano's narrow rate of return of 15.5% is greater than 4.0%, we conclude that the provincial government actually makes money on the investment.** By funding the college, therefore, other beneficiaries of provincial funding are actually subsidized through the revenues generated by the college.

Comparative Rates of Return





CONCLUSION

The results of this study demonstrate that Capilano 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 provincial economies.

Benefits at a Glance

| ECONOMIC GROWTH ANALYSIS | | | |
|----------------------------------|----------------|--------------|----------------------|
| Added Regional Income | | | |
| College operations effect | | | \$47,989,700 |
| Student spending effect | | | \$10,565,500 |
| Past student productivity effect | | | \$392,210,700 |
| TOTAL INCOME | | | \$450,765,900 |
| Annual Benefits | | | |
| <i>Higher earnings</i> | | | |
| Aggregate (all students) | | | \$25,745,300 |
| Per credit hour equivalent (CHE) | | | \$136 |
| Per full time equivalent (FTE) | | | \$4,091 |
| <i>Social savings</i> | | | |
| Aggregate (all students) | | | \$1,747,900 |
| Per credit hour equivalent (CHE) | | | \$9 |
| Per full time equivalent (FTE) | | | \$278 |
| INVESTMENT ANALYSIS | Rate of Return | Benefit/Cost | Payback (Years) |
| Students | 12.7% | 3.8% | 11.3% |
| Taxpayers: Broad Perspective | NA | 24.4% | NA |
| Taxpayers: Narrow Perspective | 15.5% | 4.9 % | 9.4% |

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

This report summarizes results from the "Economic Contribution of Capilano College: Analysis of Investment Effectiveness and Economic Growth," prepared by CCbenefits, Inc. in August 2007 as part of a systemwide analysis of BC Colleges. Data and assumptions were based on a consistent methodology applied across all participating colleges and derived from several sources, including: (1) student profile data from the Ministry of Advanced Education's Central Data Warehouse, (2) AY/FY 2005-06 academic and financial reports from the college, (3) employment and earnings data by college region from BC Stats, (4) demographic, industry, and earnings data from Statistics Canada, and (5) outputs of the regionalized input-output (IO) model developed and maintained by Economic Modeling Specialists, Inc. (EMSI). The study follows standard practice using only the most recognized indicators of investment effectiveness while applying common "data-reduction" techniques to generate regional multipliers similar to those of other popular regional IO modeling products, such as the IMPLAN and RIO models. Results are derived using a conservative methodology based on solid economic theory and carefully drawn functional relationships. The impact model has been subjected to peer review and field-tested to generate more than 700 studies for community colleges and technical institutes in the U.S. and Canada.