



# THE ECONOMIC CONTRIBUTION OF ALGONQUIN COLLEGE IN THE OTTAWA VALLEY

*Province of Ontario*

## Executive Summary

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## HIGHLIGHTS

- Students enjoy an attractive **16.1%** annual return on their investment of time and money – for every \$1 the student invests in ACOV, he or she will receive a cumulative **\$5.22** in higher future earnings over the next 30 years or so (after discounting).
- Taxpayers see a real money “book” return of **17.3%** on their annual investments in ACOV and recover all investments in **8.3** years.
- The Province of Ontario benefits from improved health and reduced welfare, unemployment, and crime, saving the public some **\$500,300** per year each year that the students are in the workforce.
- The Renfrew County economy owes roughly **\$154.1 million** of its regional income to ACOV operations and past student productivity effects. This figure amounts to roughly **8%** of a typical year’s regional economic growth.

## INTRODUCTION

*How do the Renfrew County economy and the Province of Ontario benefit from the presence of Algonquin College in the Ottawa Valley (ACOV)?*

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:

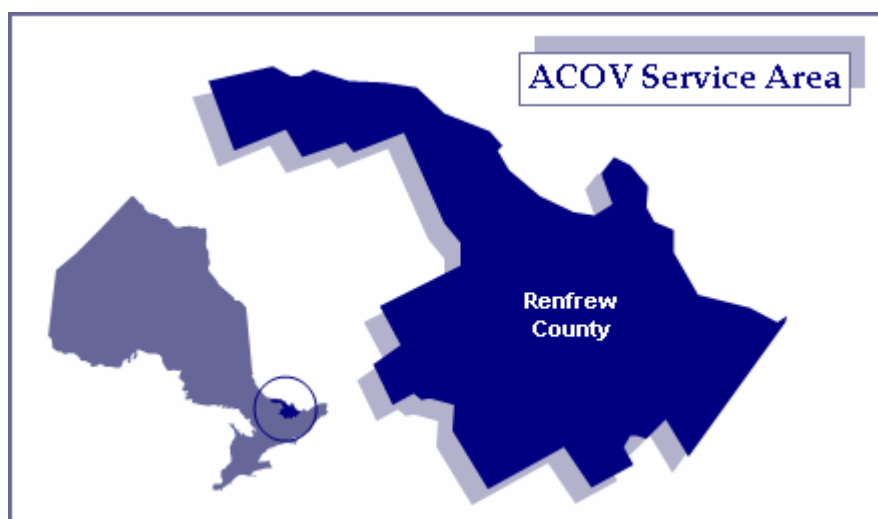
1. **Regional Economic Benefits** – Local job and income formation;
2. **Student Perspective** – Higher earnings captured by exiting students;
3. **Taxpayer Perspective** – A collection of social benefits and avoided costs;
4. **Investment Analysis** – The return to taxpayers for their college support.

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 Algonquin College in the Ottawa Valley,” containing the detailed assumptions, their context, and the computation procedures.



of ACOV's regional impact even more compelling.

The effects of ACOV break down as follows:

- *ACOV Operations Effect*

ACOV 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 ACOV, we estimate that the present-day Renfrew County economy owes roughly \$3.7 million in labour and non-labour income to ACOV operations and capital spending.

- *Student Spending Effect*

Roughly 200 of ACOV's students come from outside Renfrew County. While in the region, these students spend money to buy books and supplies, rent apartments and rooms, purchase food, pay for transportation, attend sports events, go to movies, and so on. These expenditures create revenues, jobs and incomes for local businesses. It is conservatively estimated that the spending of ACOV's out-of-region students generates approximately \$625,800 each year in regional income in Renfrew County.

- *Past Student Productivity Effect*

Each year students leave ACOV and join or rejoin the local workforce. Their added

### ➤ Regional Economic Benefits

ACOV affects the local economy in three ways: 1) through its local purchases, including the wages paid to its faculty and staff, 2) through the spending of students who come from outside the region, and 3) through a human capital effect stemming from an increase in the skill-base of the local workforce.

Other impacts of ACOV, though not analyzed in this study, include the significant economic and social benefits accruing from ACOV's provincially funded Job Connect and Summer Jobs Service youth employment programs, which provide wage subsidies to local employers to help them train youth for jobs. This translates into roughly \$877,300 that goes directly into the pockets of Renfrew County business owners each year. The effects of this program would require further study to accurately quantify, but they remain powerful statements that make the analysis

skills translate to higher income and a more robust Renfrew County economy. Based on current enrollment, turnover, and the growth of instruction over time, the local region workforce embodies an estimated 853,000 credits of past and present instruction. The accumulated contribution of past and present ACOV instruction adds some \$149.8 million in regional income to the Renfrew County economy.

**In sum, ACOV operations, student spending and past student productivity effects contribute a total of \$154.1 million to regional labour and non-labour income in Renfrew County each year.**

### ➤ 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, ACOV students will, on average, earn \$138 more per year each year they are in the workforce. Alternatively, for every full-time year they attend they will earn an additional \$4,200 per year. In the aggregate (all exiting students), the higher earnings amount to some \$5.8 million per year for each year they remain in the workforce.

**From an investment standpoint, ACOV students will enjoy a 16.1% 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 stocks and bonds. The corresponding benefit/cost ratio is 5.2, i.e.,

for every \$1 the student invests in ACOV education, he or she will receive a cumulative of \$5.22 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 9.2 years.

### ➤ Taxpayer Perspective

The provincial government spent \$5.7 million in support of ACOV 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 ACOV education. **When aggregated across all exiting students, the Province of Ontario will benefit from \$500,300 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 Province of Ontario will see health-related absenteeism decline by

871 days per year, with a corresponding annual dollar savings of approximately \$128,600. The province will benefit from the health-related savings of roughly 33 fewer smokers and 8 fewer alcohol abusers. The corresponding dollar savings are \$84,000 and \$110,300 per year, now and into the future (these savings include insurance premiums, co-payments and deductibles, and withholding for Medicare).

- *Reduced Crime*

Incarceration drops with each year of higher education. In the Province of Ontario, the number of fewer individuals incarcerated per year will result in annual savings of \$1,300 (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 \$380 per year. Finally, that people are employed rather than incarcerated adds \$900 of earnings per year to the economy.

- *Reduced Welfare/Unemployment*

There will be around 16 fewer people on welfare, and 18 fewer drawing unemployment benefits per year, saving some \$107,800 and \$67,000 per year, respectively.

## ➤ Investment Analysis

The return on a year's worth of provincial government investment in ACOV is obtained by projecting the associated educational benefits into the future, discounting them back to the present, and weighing these against the \$5.7 million

provincial taxpayers spent during the analysis year to support the college. The analysis is based on the portion of ACOV operations that is wholly dependent on provincial government support. Two investment perspectives are possible, one broad and one narrow.

- *Broad Perspective*

Taxpayers expect their annual investment in ACOV 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 provincial taxpayer support that made the benefits possible. Following this procedure, it is estimated that ACOV provides a benefit/cost ratio of 35, i.e., every dollar of provincial tax money invested in ACOV today returns a cumulative of \$35 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 provincial government budgets, namely, increased tax collections and expenditure savings. For example, in place of total increased income, the narrow perspective includes only the increased provincial 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 provincial government expenditures.

Note here that it is normal for the provincial 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 ACOV, the narrow perspective results greatly exceed the minimum expectations.

**The results indicate strong and positive returns: a rate of return of 17.3%, a benefit/cost ratio of 5.4 (every dollar of provincial tax money invested in ACOV today returns \$5.38), and a short payback period of only 8.3 years.**

## CONCLUSION

The results of this study demonstrate that ACOV 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

Regional Analysis		Regional Impact	
Regional Economic Growth			
College operations effect		\$3,747,000	
Student spending effect		\$626,000	
Past student productivity effect		\$149,757,000	
TOTAL		\$154,130,000	
Annual Benefits			
Higher earnings			
Aggregate (all students)		\$5,780,000	
Per credit hour		\$138	
Per full-year equivalent student		\$4,200	
Social savings			
Aggregate (all students)		\$500,280	
Per credit hour		\$12	
Per full-year equivalent student		\$359	
Investment Analysis	RR	B/C Ratio	Payback (Years)
Students	16.1%	5.2	9.2
Taxpayers: Broad Perspective	NA	35.4	NA
Taxpayers: Narrow Perspective	17.3%	5.4	8.3

Source: Computed from data supplied by ACOV. See Volume 1: Main Report and Volume 2: Detailed Results for documentation.