

Ministry of Post-Secondary Education and Future Skills

The Costs and Benefits of Obtaining a Post-Secondary Education for British Columbians

Ingrid Diaz – Submission for Economist REQ97833 April 2023



Introduction

A cost benefit analysis of getting a higher education for British Columbians would involve the evaluation of tangible and intangible financial costs and benefits. Costs would involve tuition fees, textbooks, course material, living expenses and the opportunity cost of the time involved in pursuing a post-secondary education versus working. The benefits would involve the increased earning potential on average, career advancement opportunities, personal growth and other intangible benefits obtained from a higher education.

The Landscape

According to the British Columbia Ministry of Advanced Education and Skills Training, around 543,000 students were enrolled in public post-secondary institutions and private degree-granting institutions in British Columbia during the 2019-20 academic year. The estimated population of British Columbians aged 20 to 24 was 336,102, while there were an estimated 261,526 individuals aged 15 to 19¹. In the 2019-20 academic year, approximately 135,000 students aged 19 to 24 were enrolled in public post-secondary institutions and private degree-granting institutions, representing roughly 23.4% of the estimated population of 19 to 24-year-olds (577,000)². The percentage of British Columbians falls below the Ontarian enrolment rate of 45.9% for the same age group.

This report is written from the perspective of a young British Columbian evaluating the value of obtaining a post-secondary diploma and considering their options for the future.

Statistics Challenges

Depending on their life situation, some individuals may face greater challenges in deciding to pursue post-secondary education. In Canada during the 2014 school year, the four-year graduation rate for undergraduate degrees was 39.1% and 74.5% after six years³. Technical schools had a 49% graduation rate after three years and 57.2%⁴ after four years, while master's degrees had a 61.4%⁵ graduation rate after two years and 84.8% after four years.

Costs of an undergraduate degree

The average British Columbian student will have a yearly bill of \$7,062⁶ for undertaking a undergraduate degree. In comparison to the rest of Canada, they fare in eighth place with Nova Scotia taking the lead at \$10,368 of tuition fees per year.

Apart from tuition fees, students also have to consider the cost of living when attending one of the 16 universities in British Columbia. The University of British Columbia (UBC) has the largest student body with 66,258 students, followed by Simon Fraser with 29,000. Taking UBC and Simon Fraser as examples, the average annual cost of living for a student in the area is estimated to be \$24,759, assuming a 500 square foot apartment and the use of public transportation within a reasonable distance.⁷

The average length of time it takes to complete a degree or diploma varies depending on the career path. In 2015, obtaining a trade school diploma took an average of 2.52 years, while earning an undergraduate degree took an average of 4.53 years, and obtaining a Master's degree took an average of 2.15 years.

¹ Statistics Canada. [Table 17-10-0005-01 Population estimates on July 1st, by age and sex](#)

² <https://www2.gov.bc.ca/gov/content/education-training/post-secondary-education>

³ Statistics Canada. [Table 37-10-0140-03 Persistence and graduation of undergraduate degree students, within the province or territory of first enrolment, by student characteristics](#)

⁴ Statistics Canada. [Table 37-10-0136-02 Graduation of career, technical or professional training diploma students, within Canada, by student characteristics](#)

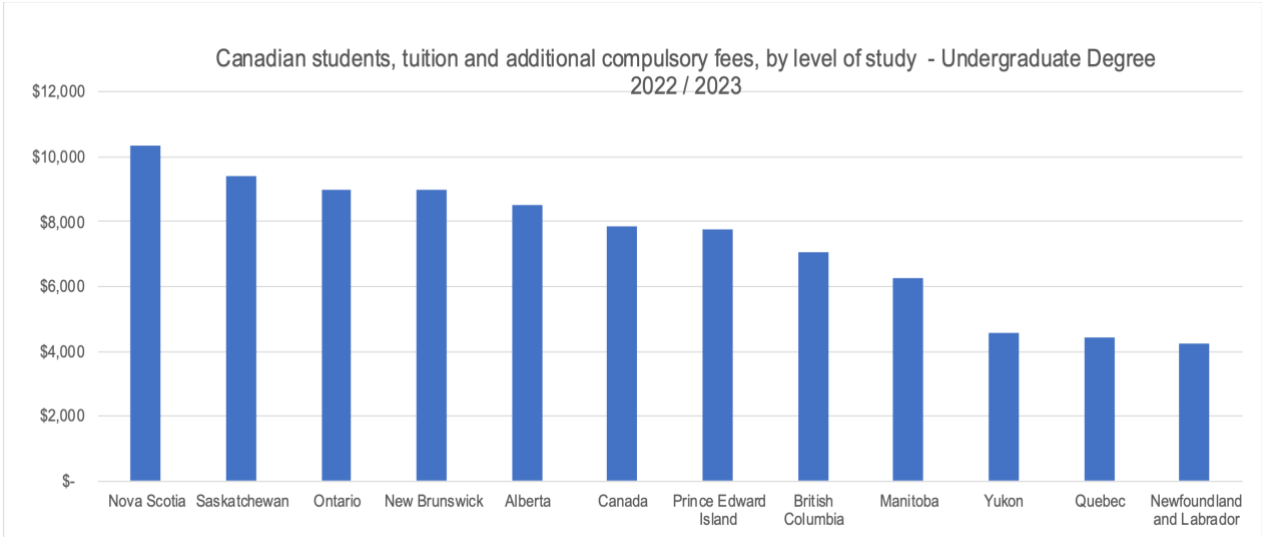
⁵ Statistics Canada. [Table 37-10-0136-04 Graduation of master's degree students, within Canada, by student characteristics](#)

⁶ Statistics Canada. [Table 37-10-0121-01 Canadian students, tuition and additional compulsory fees, by level of study](#)

⁷ <https://www.costofliving.workbc.ca/>

Other costs that are not direct but nonetheless important, such as the opportunity costs of working straight out of high school and the added experience or leg up that it might give in the job market. The average wage for a BC resident with a high school diploma, aged 19 to 24 was \$17,461 and \$17,170 in Canada in 2016.⁸

Chart 1. Student’s Tuition and Additional Compulsory fees for an undergraduate degree by Province



Benefits of a post-secondary education

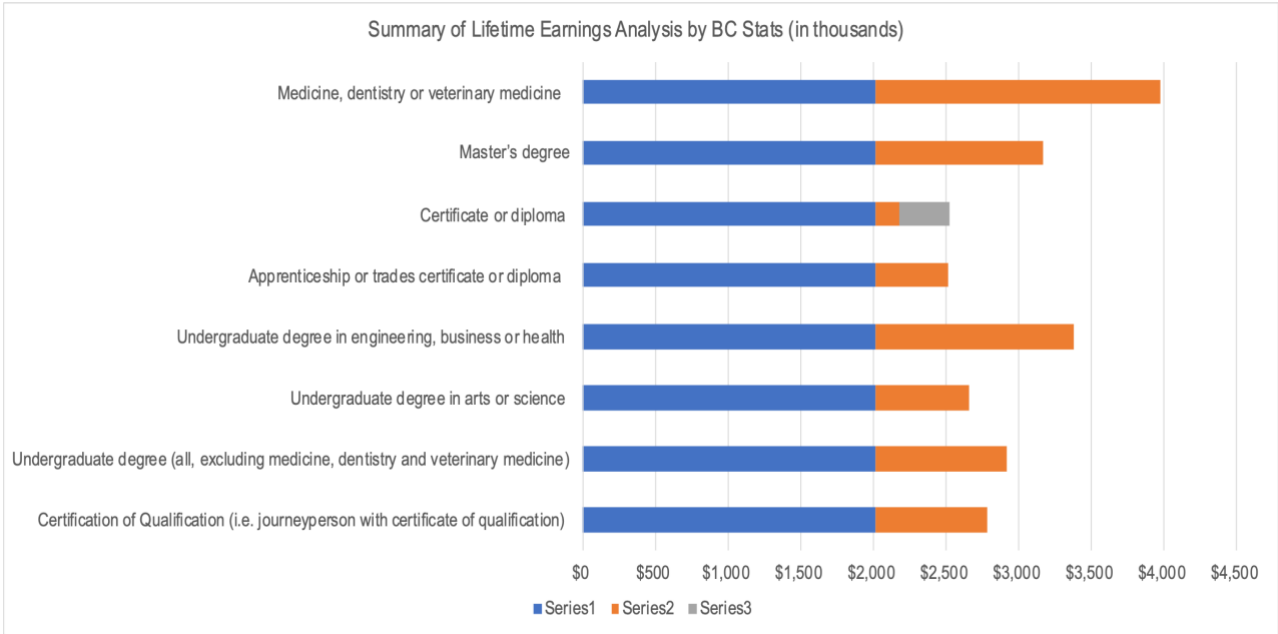
The benefits of obtaining an education have been widely acknowledged, including the potential for higher earnings, increased career opportunities, and an overall improvement in one’s standard of living. In British Columbia, for instance, the average lifetime earnings for a resident with a high school diploma amount to \$2,012,000. The additional lifetime earnings of someone with a post-secondary education can vary, from and additional \$169,000 to \$343,000 for a Certificate or Diploma to and additional \$1,960,000 lifetime earnings for Medicine, dentistry or veterinary medicine.⁹ See Chart 2 below.

There are other benefits from getting an education, for the class of 2015 the median employment income increased from \$47,900 after two years of employment to an additional \$11,900 at five years after graduation.

⁸ Statistics Canada. [Table 37-10-0152-01 Average earnings or employment income, by age group and highest certificate, diploma or degree \(x 1,000\)](#)

⁹ <https://www2.gov.bc.ca/assets/gov/education/post-secondary-education/data-research/lifetime-earnings.pdf>

Chart 2. Lifetime Earnings



Analysis of a post-secondary education

To summarize the costs and benefits, we will take first, the costs of undertaking an undergraduate degree vs the benefits of the lifetime earnings. For instance, assuming a student completes their degree within the average duration and lives in an affordable location without dependents, the estimated cost of living in Vancouver would be \$24,559. Notably, individuals who pursue degrees in engineering, business, or health can reap the most benefits, with potential earnings of up to \$1,148,659. While a certificate degree can yield a positive outcome, the difference in lifetime earnings between the low and high ends is significant, with only \$51,057 in additional net income for the former compared to \$225,057 for the latter.

Table 1. The Undergraduate degree (All)

Undergraduate Degree	
Cost of living for 4.53 yrs. average completion time by \$24,559 costs per year	\$111,252
Total Tuition costs for an undergraduate degree ¹⁰	\$31,991
Opportunity costs of Working 4.53 yrs. out of High School with an average yearly pay of \$17,461	\$79,098
Total Costs	\$222,341

¹⁰ Statistics Canada. Table 37-10-0121-01 Canadian students, tuition and additional compulsory fees, by level of study

Undergraduate Degree (Cont'd)

Total Benefit - Additional Lifetime Earnings - (All, excluding medicine, dentistry and veterinary medicine)	\$904,000
Net Benefit - (All, excluding medicine, dentistry and veterinary medicine)	\$681,659
Total Benefit - Undergraduate degree in arts or science	\$644,000
Net Benefit - Undergraduate degree in arts or science	\$421,659
Total Benefit - Undergraduate degree in engineering, business or health	\$1,371,000
Net Benefit - Undergraduate degree in engineering, business or health	\$1,148,659

Table 2. The Certificate or Diploma

Certificate Degree

Costs of living for 2.61 yrs. average completion time by \$24,559 costs per year	\$64,099
Total Tuition costs for the degree \$3,169 ¹¹ by 2.61 years to complete	\$8,271
Opportunity costs of Working 2.61yrs. out of High School with an average yearly pay of \$17,461	\$45,573
Total Costs	\$117,943
Total Benefit - Additional Lifetime Earnings – Low estimate	\$169,000
Net Benefit - Low	\$51,057
Total Benefit - Additional Lifetime Earnings – High estimate	\$343,000
Net Benefit - High	\$225,057

Conclusions and Recommendations for Further Research

To sum up the findings, it appears that obtaining a certificate degree offers the least reward in terms of the amount of time and resources invested. It is worth considering ways to minimize the costs of pursuing a higher education. If choosing a non-university degree path, pursuing a skilled trade with a high barrier to entry and a relatively short training period would likely be the most profitable solution. For example, a welding program could offer a good return on investment within as little as 28 weeks¹². However, a detailed analysis on this topic would require a separate paper.

Further analysis is needed to determine whether there are geographic variations in the cost benefits of pursuing an undergraduate degree in BC. Specifically, we should examine factors such as student mobility rates, graduation and dropout rates, and how they compare to national averages. Additionally, rising living and housing costs should be considered, as they may differ across different regions of BC and impact a person's likelihood of finding employment or completing their program. These are critical questions that require further evaluation

¹¹ <https://www2.gov.bc.ca/gov/content/education-training/post-secondary-education/data-research/cost-of-post-secondary-education>

¹² <https://www.bcit.ca/programs/welder-foundation-certificate-full-time-2847cert/#details>